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1987

# Census of Mineral Industries

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MIC87-S-1

SUBJECT SERIES

## General Summary

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# ACKNOWLEDGMENTS

Many persons participated in the various activities of the 1987 Census of Mineral Industries.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Industry Division. **John Govoni**, Assistant Chief for Census/ASM Programs, was responsible for the overall planning, management, and coordination of the census of mineral industries. Planning and implementation were under the direction of **John P. McNamee**, Chief, Minerals Branch, assisted by **Patricia L. Horning**.

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If you have any questions concerning the statistics in this report, call (301) 763-5938.

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Issued March 1991



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# INTRODUCTION

## 1. PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

*Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.*

*Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.*

*State and local Governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.*

*Trade associations study trends in their own and competing industries, and keep their members informed of market changes.*

*Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.*

## 2. AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

## 3. AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

## 4. WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

## 5. HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial



activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

## 6. AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent

observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

## 7. SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

## 8. CONTENT OF THE ECONOMIC CENSUSES

**General**—The economic censuses provide a comprehensive statistical profile of a large segment of the national economy. This program includes censuses of manufactures, retail trade, wholesale trade, service industries, mineral industries, and construction industries. In 1987, these industries accounted for nearly 60 percent of the \$4.5 trillion of the gross domestic product and 68 percent of that originating in the private sector. The principal industry groups not covered were finance, insurance, and real estate; agriculture, forestry, and fishing; communications; and electric, gas, and sanitary services; and transportation. Limited information on transportation is collected, e.g., truck registration and distances travelled, and shipments of commodities by type of transport and distance shipped. The dates of each of the economic censuses are shown in table A.

**Enterprise statistics**—Through the history of the economic censuses, the unit of enumeration has been the establishment; i.e., a single physical location engaged in a specific line of business (for more discussion, see item 11). This unit is suited for obtaining measures of direct output and input labor, material, capital, etc. It is also best suited for providing refined industry and geographic tabulations. Statistics measuring overall income and balance sheet data are best collected at the company or enterprise level. In the early 19th century, these two business units were often identical. With the rise of large scale operations, it became quite common for the large companies to operate many separate establishments in a number of diverse industries so that today the establishment and enterprise frequently are not the same. Enterprise measures and balance-sheet data have typically been provided by the Internal Revenue Service (IRS) in its *Statistics of Income* and the Census Bureau in its *Quarterly Financial Report of Corporations*.

In 1954, as part of the economic censuses program, the Bureau of the Census also developed an enterprise statistics program. This program relates census company-level

Table A. Years Covered by Economic Censuses: 1809 to 1987

Year covered	Manufac- tures	Mineral industries	Fisheries	Construc- tion indus- tries	Retail trade	Wholesale trade	Service industries <sup>1</sup>	Transporta- tion <sup>2</sup>
1987.....	X	X	—	X	X	X	X	X
1982.....	X	X	—	X	X	X	X	X
1977.....	X	X	—	X	X	X	X	X
1972.....	X	X	—	X	X	X	X	X
1967.....	X	X	X	X	X	X	X	X
1963.....	X	X	X	—	X	X	X	X
1958.....	X	X	—	—	X	X	X	—
1954.....	X	X	—	—	X	X	X	—
1948.....	—	—	—	—	X	X	X	—
1947.....	X	—	—	—	—	—	—	—
1939.....	X	X	—	X	X	X	X	—
1937.....	X	—	—	—	—	—	—	—
1935.....	X	X	—	X	X	X	X	—
1933.....	X	—	—	—	X	X	X	—
1931.....	X	—	—	—	—	—	—	—
1929.....	X	X	—	X	X	X	—	—
1927.....	X	—	—	—	—	—	—	—
1925.....	X	—	—	—	—	—	—	—
1923.....	X	—	—	—	—	—	—	—
1921.....	X	—	—	—	—	—	—	—
1919.....	X	X	—	—	—	—	—	—
1914.....	X	—	—	—	—	—	—	—
1909.....	X	X	—	—	—	—	—	—
1908.....	—	—	X	—	—	—	—	—
1904.....	X	—	—	—	—	—	—	—
1902.....	—	X	—	—	—	—	—	—
1899.....	X	—	—	—	—	—	—	—
1889.....	X	X	X	—	—	—	—	—
1880.....	—	X	X	—	—	—	—	—
1879.....	X	—	—	—	—	—	—	—
1870.....	—	X	—	—	—	—	—	—
1869.....	X	—	—	—	—	—	—	—
1860.....	—	X	—	—	—	—	—	—
1859.....	X	—	—	—	—	—	—	—
1850.....	—	X	—	—	—	—	—	—
1849.....	X	—	—	—	—	—	—	—
1840.....	—	X	—	—	—	—	—	—
1839.....	X	—	—	—	—	—	—	—
1819.....	X	—	—	—	—	—	—	—
1809.....	X	—	—	—	—	—	—	—

— Not published. X Published.

<sup>1</sup>Actual coverage varied from census to census.

<sup>2</sup>Limited information only.

data to data measuring activities of individual operating units or establishments within the companies. Thus, a measurement of the integration and diversification of the American enterprise system became available. The enterprise statistics program also made it possible to link census establishment-based data on a modified basis to enterprise-based statistical systems, such as the IRS's *Statistics of Income for Corporations*.

## 9. ECONOMIC SIGNIFICANCE OF THE MINING SECTOR

The mineral industries, in recent years, have accounted for about 1 percent of national income and have provided employment for less than 1 percent of all gainful workers in

the United States. Nevertheless, the mineral industries furnished a large proportion of the raw-materials base of the economy. In 1987, the mining industries accounted for 44 percent of the gross domestic product for the combined domestic raw materials industries of mining, agriculture, forestry, and fishing.<sup>1</sup>

Minerals production in the United States requires relatively larger capital expenditures than does manufacturing production. Although value added by mining in 1987 amounted to only 8.7 percent of total value added for mining and manufacturing combined, capital expenditures in the mineral industries were 16.4 percent of the total for mining and

<sup>1</sup>U.S. Bureau of Economic Analysis, *Survey of Current Business*, January 1991.



**Table B. Value Added, Capital Expenditures, and Employment in Mineral and Manufacturing Industries: 1987**

Item	Value added (million dollars)	Capital expendi- tures (million dollars)	Employment (1,000)
Mineral industries:			
All mining.....	110 959.1	15 418.1	698.1
Oil and gas extraction only .....	80 048.8	11 717.4	377.9
Manufacturing industries	1 165 746.8	78 647.8	18 950.3
Mineral industries as percent of mineral and manufacturing industries:			
All mining.....	8.7	16.4	3.6
Oil and gas extraction only .....	6.3	12.5	1.9

manufacturing (see table B). Moreover, the oil and gas extraction industries alone accounted for 12.5 percent of all capital expenditures for mining and manufacturing. In comparing figures in table B, it should be noted that value added by mining includes a measure of value added in the development of mineral properties (see item 24), and capital expenditures include expenditures for development of mineral properties (see item 25).

## 10. THE CENSUS OF MINERAL INDUSTRIES—SURVEY DESCRIPTION

In the farm-oriented economy of the early 19th century, the need for mineral statistics for setting government policy, except for tariffs and taxes, was slight. The only sources of information on the mining sector were the censuses of mineral industries, then taken at 10-year intervals. Today, the need for mining statistics has greatly increased so there is now a vast array of detailed information covering virtually every measurable aspect of mining activity including employment; payrolls; hours worked; production; prices; inventories; orders; investment in structures; machinery and equipment; and consumption of raw materials, fuels, and water. The census of mineral industries, though conducted only at 5-year intervals, still plays an essential role, since no other source measures the structure of the mining sector in such a comprehensive and detailed way.

For every mining establishment with one employee or more, the census obtains data on its input of labor, materials, and capital; its output of products and services; its location; and the legal form of organization of the owning firm.<sup>2</sup>

A set of summary or general statistics is developed for each establishment (i.e., total employment, payroll, production-worker employment, hours worked, wages, cost of supplies, value of shipments and receipts, capital expenditures, and value added by mining) and aggregated by

industry, by area, by employment size of establishment, and by type of ownership. Reports are published on the detailed industrial characteristics of each State, and overall measures of mining activity are shown at the county level provided the information can be published without compromising the confidentiality of individual company data. Since census legislation guarantees confidentiality to the firms that are required to report, it is frequently necessary to suppress some aggregates.

The census of mineral industries also is used to update other indicators of economic activity, especially the national income accounts. Census data on materials consumed and product output by industry are basic to the input-output matrix developed by the Bureau of Economic Analysis for the mining sector. The Federal Reserve Board monthly Index of Industrial Production, a key indicator of current economic activity, relies on census industry and product data as benchmarks and weights to sum industries to higher levels of aggregation. The census also provides benchmarks for surveys conducted by other government agencies and by associations.

## 11. INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

**Structures of the standard industrial classification**—The establishments in the census of mineral industries are classified according to the Standard Industrial Classification (SIC) Manual.<sup>3</sup> The SIC manual covers the entire field of economic activities, subdivided as follows:

Below the major group level, the SIC provides for three-digit groups and finally for four-digit industries. To illustrate:

### Division B, Mining

Major group 10.....Metal mining  
Industry group 104 .....Gold and silver ores  
Industry 1044 .....Silver ores

The SIC was developed to classify establishments as distinguished from similar systems used to classify companies or enterprises. An establishment is defined as a single physical location engaged in one of the industry categories of the SIC.

The SIC is the responsibility of an interagency technical committee established by the Office of Management and Budget. The system is used by all Federal Government agencies engaged in the classification of establishments. Many State and local governments and business concerns also organize their own records along SIC lines in order to facilitate comparison with Federal statistics.

<sup>2</sup>Since 1967, some of this information for small companies was not obtained directly, but estimated from other government records. See the discussion of coverage of establishments in items 11 and 13.

<sup>3</sup>**Standard Industrial Classification Manual: 1987:** For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.



The first SIC manual was issued in 1939. For the mining sector, the nucleus was the set of industry classifications developed over many years for use in the census of mineral industries. A revised manual was issued for the mining industries in 1945 and, with minor modifications, used for the 1954 Census of Mineral Industries. Minor revisions of the SIC between 1958 and 1967 introduced some four-digit industry changes, but none of them crossed three-digit group lines. Another revision of the SIC for 1972 produced additional four-digit industry changes. This revision affected 17 industries, as defined for 1967, by merging them into 6 newly defined industries. These revisions and their impact on comparability appear in the introduction, "Industry and Product Classification" of the 1972 census General Summary. The latest revision affecting comparability was issued for 1987. Appendix A of the 1987 manual notes the revisions in the four-digit industry levels between 1972 and 1987.

**Structure of the SIC mining division**—For the mining division, there are 4 two-digit SIC major groups (10, 12, 13, and 14), which are subdivided into 20 three-digit SIC groups (101 to 149), and further subdivided into 31 four-digit industries (1011 to 1499).

Most of the 31 mineral industries are defined in terms of specific groups of related products. In determining the boundaries of industries, it is essential that each industry comprises a group of establishments that are highly specialized in producing products that define the industry (primary products) and that a large proportion of all the products be made in establishments classified in the industry.

There are wide differences among industries in their purity; i.e., the extent to which the establishments classified in the industry:

1. Account for the total production of commodities "primary" to the industry.
2. Produce products or services "belonging" to other industries; i.e., secondary products.
3. Use similar materials or processes.

These variations are frequently construed to be shortcomings. However, these limitations in the classification structure arise from the inherent complexity of our economic system and from the variation in types of production that take place in individual establishments.

While the SIC is the basis for aggregating census data, the data collected, in turn, provide the statistical basis for periodic critical evaluation of that classification system and its revision.<sup>4</sup>

<sup>4</sup>See **Industry Classification and Sector Measures of Industrial Production** by James W. McKid, Bureau Working Paper No. 20, 1965, and **Historical Comparability of Census of Manufactures Industries, 1929-1958** by Harold T. Goldstein, Bureau of the Census Working Paper No. 9, 1959.

No general-purpose system of industrial classification can satisfy all users of census data. Some business users are interested primarily in a narrow range of products which they and their competitors produce. Others are involved in a wide range of products that move through the same marketing channel. Others seek data relating to the consumers of one or more types of materials. Some are interested only in the data for highly specialized plants; others, for plants producing a "full line" of products. Those studying productivity may require data for plants using the same techniques.

The large number of SIC industries provides the analyst with the "building blocks" for making useful approximations, even if specific data cannot be developed to resolve many of these problems. A single general-purpose system of classification can only partially satisfy these diverse needs; a point is soon reached at which the adaptation of a system to better serve one use will reduce its ability (sometimes disproportionately) to serve an alternative use.

Accordingly, users of data frequently regroup detailed SIC industries differently from the two- and three-digit SIC categories. Public and private agencies also recombine the detailed classes. The four-digit industries are more susceptible to allocation to such categories than the two-digit SIC groups.

**Subindustries**—The Bureau of the Census frequently has further classified some of the basic four-digit SIC industries into "subindustries." Subindustries are employed where there are wide disparities in the operating ratios of the establishment in the industry because the establishment is operated as a mine only, a mine with treatment plant, a treatment plant only, or because the operated mine is underground, open pit, or a combination. This technique was used for all mining industries for editing purposes, and many were regarded as significant enough to be used for publication.

**Definition of mining**—The mineral industries include all establishments primarily engaged in mining. This term is used in the broad sense to include the extraction of:

1. Minerals occurring naturally.
2. Solids, such as coal and ores.
3. Liquids, such as crude petroleum.
4. Gases, such as natural gas.

The term "mining" is also used in the broad sense to include quarrying, well operation, milling (crushing, screening, washing, flotation, etc.), and other preparation and beneficiating needed to render the mineral marketable. Exploration is included as is the development of mineral properties. Services performed on a contract, fee, or other basis in the development of mineral properties are classified separately within this division.



Mining operations are classified by industry on the basis of the principal mineral produced or, if there is no production, on the basis of the principal mineral for which exploration or development work is in process. The recovery of material from culm banks, ore dumps, and other waste minerals piles is classified in the appropriate mining industry according to the mineral product recovered.

Mineral preparation plants are usually operated together with mines or quarries and, frequently, no separate records are maintained. All such preparation plants are included in the scope of the minerals census. Coal cleaning and sizing plants operated at mines or as separate establishments are also included. However, crushing, grinding, and other treatment of certain nonmetallic minerals at separately operated plants are included in the manufacturing industries. Contract hauling (except out of open pits in conjunction with mining) is excluded from the mineral industries.

Statistics on mining operations which are carried on as secondary activities at manufacturing establishments (such as clay pits at clay products plants) are not within the scope of this census. However, certain information on these operations has been obtained in the census of manufactures and is included in some of the industry reports and in the State reports. Wherever such inclusion occurs, it is clearly specified.

All blast furnaces; metal smelters; metal and petroleum refineries; plants manufacturing cement, brick, tile, and pottery; and plants engaged in dressing or polishing stone are classified in the manufacturing industries. Separate reports were obtained and included in the minerals census for the few ore dressing plants operated in conjunction with smelters.

**SIC classifies establishments**—The SIC is an establishment classification system, and the census of mineral industries is conducted on an establishment basis. That is, a company with operations at more than one location is required to submit a report for each location. On the other hand, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and field operations and contract services, reporting was somewhat different from the “establishment” reporting basis used for other types of mining. Concerns operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each State or offshore area adjacent to each State in which they conducted such activities. Concerns which supplied contract services for mining establishments were required to submit one report covering all such activities in the United States. Information on receipts for services, production-workers’ wages and hours, was requested by State. These consolidated reports were then allocated to State establishments

based on the data reported at the State level. The 1987 figures for establishments include the summation of operations for each State allocated from these nationwide reports.

The requirement that distinct lines of activity at the same location be separately reported was applied only where the establishment produced and shipped significant amounts of products classified in different SIC industries. In widely varying degrees, many mining establishments extract products that fall into different SIC industries. Generally, the amounts involved are not significant enough to warrant the filing of separate reports, even if feasible. However, there are a number of locations at which large numbers of employees are engaged in activities defined in different industries of the SIC. Frequently, companies organize their operations and their records separately for the diverse activities and report them as separate plants. When they do not do so on their own initiative, the Bureau of the Census requests separate reports if it appears that 100 employees or more are involved in each activity. For the most part, companies have cooperated and “split out” the different activities that would otherwise significantly distort the relationship of the industry and product statistics. Frequently, however, the two groups of products cannot be distinguished sufficiently in company records to provide establishment-type reporting.

**Establishments included in census of mineral industries**—Since the 1967 Census of Mineral Industries, the censuses have included only establishments of companies with one paid employee or more. Prior to 1967, different criteria were used to determine if an establishment had to report in the census. In the 1963, 1958, and 1954 censuses, establishments without paid employees were excluded if any of the following three items amounted to less than \$500 for the entire year:

1. Value of products shipped and services performed for others.
2. Expenses for wages, salaries, supplies, minerals received for preparation, fuel, purchased electric energy, contract work, and purchased machinery.
3. Capital expenditures for development and exploration of mineral properties, new construction and major alterations, and new and used machinery and equipment.

In general, small establishments were excluded from the 1939 and 1929 censuses if each of three similar items amounted to less than \$2,500 and from the 1919 census if value of products was less than \$500 and expenditures for development work less than \$5,000. An output criterion of



Table C. **Percent of Mining Establishments, Value Added by Mining, and Capital Expenditures, by Employment-Size Class: 1987**

Employment-size	Percent of total		
	Mining establishments	Value added by mining	Capital expenditures
<b>All establishments.....</b>	100.0	100.0	100.0
0 to 4 employees.....	50.4	5.9	7.3
5 to 9 employees.....	16.9	4.6	4.9
10 to 19 employees.....	14.0	7.4	6.9
20 to 49 employees.....	11.2	13.7	13.2
50 to 99 employees.....	3.9	12.9	11.9
100 to 249 employees.....	2.3	15.8	17.4
250 to 499 employees.....	.9	12.4	11.9
500 to 999 employees.....	.3	13.2	12.0
1,000 employees or more....	.1	14.0	14.5

1,000 tons for bituminous coal and lignite was used in these three censuses. Common sand and gravel operations were excluded in 1939 if they produced less than 15,000 tons of sand and gravel and had expenses of less than \$15,000. For 1929, common sand and gravel establishments producing less than 25,000 tons were excluded. This industry was not covered in censuses prior to 1929. In earlier censuses, there were no minimums for size of establishments.

The production of minerals, particularly stone, sand, and gravel, by Federal, State, and local governments is excluded from the census. Also excluded is production of these items by highway contractors and construction contractors who do not maintain separate records for sand and gravel production.

The census includes, however, mining establishments of the same company, such as coal mines serving only coke ovens operated by the same company, oil and gas wells serving only refineries or public utilities owned by the same company, and copper mines and mills where all of the ore is transferred to a company-owned smelter.

The percent of mining establishments, value added by mining, and capital expenditures by employment-size classes are shown in table C.

In general, the 1987 minerals census reports provide complete coverage of production and development operations although there are certain limitations to coverage in some industries. These limitations are discussed in detail in the industry reports.

**Special treatment of small establishments**—Beginning with the 1967 census, an effort was made to relieve the very small establishments from the necessity of filing a census report. In the 1987 minerals census, small single-unit companies with up to 20 employees (the cut off varied by industry), were excused from filing reports. Approximately 12,500 companies fell into this category in 1987. Limited data on payrolls, sales, and industry classification from the administrative records of the Social Security Administration (SSA) and the Internal Revenue Service

(IRS) were made available to the Bureau of the Census. (Special arrangements were made to safeguard the confidentiality of both tax and census records.) Data other than payrolls and sales for these small establishments were imputed from industry average ratios. The effect on industry aggregates is slight in most industries; for mining as a whole, these small "administrative records" accounted for only 2.5 percent of the value added. Detailed product and materials data for these small establishments were not estimated; the entire value of product shipments and cost of materials was imputed to a "not specified by kind" category.

If these establishments had been included in the 1982 Census of Mineral Industries, they were assigned the industry classifications to which they had been coded. If they had started operations later, they were coded on the basis of brief descriptions of the general activity of the establishment as reported to the Social Security Administration. Where the description is incomplete or there are relatively fine lines of demarcation between industries or between mining and nonmining activity, the code assigned to an establishment could differ from that which would have been assigned on the basis of more complete product information. Therefore, the Bureau of the Census conducted a special classification survey in order to clarify the industry codes of some of the establishments in the administrative-record file. All establishments without specific four-digit codes and those where there could be significant misclassification between mining and other sectors were either sent a classification questionnaire or a general schedule, Form NC-9923. Nevertheless, the total establishment counts in most industries should be viewed as approximations rather than precise measurements. The counts for establishments with 20 employees or more are far more reliable than the total number of establishments.

**Auxiliary units**—Mining requires a wide range of diverse support activities. These activities include general administrative; supervisory; purchasing; accounting; general engineering and systems planning; and legal, financial, and related management functions usually performed centrally for other establishments of the same company. These separate locations are referred to as auxiliaries. An auxiliary is an establishment whose employees work primarily in supporting services for other establishments of the same company (i.e., its mines, factories, retail stores, etc.) rather than for other business firms or organizations. Employment and payroll data for auxiliary units are included in the published data for the census of mineral industries.

**Product codes**—The SIC coding system is designed to describe industries and operates in such a way that the definitions become progressively narrower with successive additions of numerical digits. There are 4 very broad two-digit groups, 20 three-digit groups, and 31 four-digit industries. Based on the SIC, the Bureau of the Census has developed a product coding system along similar lines which contains 75 five-digit product classes and 180



individual seven-digit products. The seven-digit products and five-digit product classes are considered the primary products of the industry with the same first four digits as the product code. For example, the seven-digit product code number 10211 05 refers to crude copper ore mined from open pit operations. The first five digits of this code number 10211, refer to the "product class" crude copper bearing ores, and the first four digits, 1021, refer to the industry in which these products are made (the copper ores industry). The same system is applied to the coding of materials. The first four digits of a material code (for example, the code number 102100, copper ores, concentrates, and precipitates) used as a material describe the industry that produces it; e.g., 1021, the copper ore industry.

The SIC-based commodity classification is used in the Bureau of the Census' entire industrial statistics program, including monthly, quarterly, and annual surveys, and also in the census of wholesale trade. The Bureau of the Census also publishes data on imports and exports in terms of SIC-based categories as well as the traditional Schedule B and Tariff Schedule of United States Annotated (TSUSA) systems.<sup>5</sup>

**Primary and secondary products of establishments**—An establishment is classified in a particular industry if its production of the primary products of that industry exceeds in value its production of products of any other single industry. The industry code assigned to the establishment is derived from a summation of values of seven-digit product codes to their four-digit industry and the selection of the largest four-digit value as the establishment's industry classification. However, as mentioned earlier, the industry classification of an establishment may be determined not only by the products it makes but also by the processes employed or materials used in making those products.

While some establishments produce only the primary products of the industry in which they are classified, it rarely happens that all the establishments in any industry specialize to this extent. Therefore, the general statistics (employment, payrolls, inventories, value added by mining, total value of shipments and receipts, capital expenditures, etc.) shown for an industry (tables 1 to 4 of the industry reports) encompass not only the primary activities of the establishments in that industry but also their secondary activities. On the other hand, the product statistics in table 6 of the industry reports measure the total output of specific products whether they are produced by establishments classified in the same industry as the product or not. For this reason, in relating the general statistics of an industry, especially the industry total value of shipments (industry reports, tables 1 to 4), to the product statistics (table 6), the composition of the industry's output as shown in table 5 should be considered.

<sup>5</sup>Schedule B is the U.S. export classification, while TSUSA is applied to imports.

Table D. Value Added by Mining for States: 1987

Geographic area	Value added (million dollars)	Percent
<b>United States .....</b>	<b>110 959.1</b>	<b>100</b>
Alabama .....	1 234.7	1.1
Alaska .....	8 018.8	7.2
Arizona .....	1 142.8	1.0
Arkansas .....	521.3	.5
California .....	6 484.2	5.8
Colorado .....	1 832.1	1.7
Connecticut .....	105.6	.1
Delaware and District of Columbia ..	11.4	(V)
Florida .....	1 027.4	.9
Georgia .....	827.6	.7
Hawaii .....	23.5	(V)
Idaho .....	171.3	.2
Illinois .....	2 180.5	2.0
Indiana .....	815.4	.7
Iowa .....	131.3	.1
Kansas .....	1 671.7	1.5
Kentucky .....	3 698.6	3.3
Louisiana .....	16 655.7	15.0
Maine .....	5.5	(V)
Maryland .....	273.9	.2
Massachusetts .....	132.0	.1
Michigan .....	1 499.6	1.4
Minnesota .....	554.5	.5
Mississippi .....	930.8	.8
Missouri .....	466.1	.4
Montana .....	1 167.1	1.1
Nebraska .....	119.0	.1
Nevada .....	1 177.5	1.1
New Hampshire .....	40.9	(V)
New Jersey .....	241.2	.2
New Mexico .....	3 539.1	3.2
New York .....	484.3	.4
North Carolina .....	414.2	.4
North Dakota .....	978.1	.9
Ohio .....	1 839.8	1.7
Oklahoma .....	5 523.1	5.0
Oregon .....	78.5	.1
Pennsylvania .....	2 561.6	2.3
Rhode Island .....	15.6	(V)
South Carolina .....	143.1	.1
South Dakota .....	190.8	.2
Tennessee .....	458.4	.4
Texas .....	29 676.5	26.7
Utah .....	1 552.0	1.4
Vermont .....	57.8	.1
Virginia .....	1 554.4	1.4
Washington .....	275.7	.2
West Virginia .....	3 674.1	3.3
Wisconsin .....	155.2	.1
Wyoming .....	4 362.0	3.9
Offshore areas not associated with a State .....	263.1	.2

(V) Rounds to zero.

## 12. GEOGRAPHIC CLASSIFICATION

**Census divisions and regions**—The 1987 Census of Mineral Industries measures industrial activity at the National, State, and county levels. Prior to 1977, similar information



was summarized for the traditional nine geographic divisions (e.g., New England, Middle Atlantic, etc.) and the four geographic regions (Northeast, South, Middle Atlantic, and West).

The presentation of data for individual industries and industry groups at all these geographic levels has always created serious problems in protecting the confidentiality of individual company data. Consequently, it has frequently been necessary to set priorities as to what will be published. In the past, the preference was given to publishing data for the broad geographic regions over States leading to greater suppression of industry detail at the State level. There has been increasing interest in State information in preference to the broader regions. As a result, since 1977

the censuses of mineral industries has given first precedence to publishing State figures. A decision also was made to forgo publication of any divisional and regional totals. This was desirable to avoid suppressing industry detail that could have been published in one State to protect data for another State in the same division that had to be suppressed to preserve the confidentiality of a respondent's figures.

Thus, some summary tables for the nine geographic divisions and four regions that were published prior to the 1977 censuses, do not appear in the publications of the 1987 Census of Mineral Industries. The relative importance of mining among the States is shown in table D.

## II. SURVEY METHODS

### 13. PLANNING AND PREPARATION

**General**—The Bureau of the Census has an obligation to meet public needs for timely and reliable information while holding costs and the burden on respondents to a minimum. During the planning stages of each economic census, the advice of trade and professional associations, Federal and State Government agencies, individual companies, labor unions, and research and educational organizations is sought in an effort to reach both the users of data and the respondents who supply the basic figures. Simultaneously, the problems encountered in the previous censuses are studied; and improved methods of collection, processing, and tabulation are explored.

**Mailing lists**—Beginning with the 1954 economic censuses, the basic mailing lists have been obtained from IRS and SSA records. These records also were sampled to develop statistics for retail and service establishments with no employees. After the 1963 censuses, feasibility studies indicated that greater use could be made of the data in the IRS-SSA records. In the 1967 censuses, over 2,000,000 firms were exempted from the filing requirement, including 10,000 small mining firms. Instead, census-type statistics for this group were developed from IRS-SSA records. In close cooperation with IRS and SSA, specific procedures for the use of individual tax returns that assured confidential treatment of them were developed and set forth in Executive Order No. 10911, dated January 17, 1961, and Treasury Decision No. 6547 of the same date. The records used were business income tax returns (IRS forms 1040C, 1065, 1120, and 1120S) and payroll tax returns (IRS form 941). The name, address, payroll, and general business receipts were obtained from these reports, in addition to the SIC industrial activity code assigned by SSA. Other census statistics for these small firms were imputed using industry average ratios of the data item to payrolls and sales.<sup>6</sup>

This procedure was repeated in the 1972, 1977, 1982, and 1987 economic censuses. In 1972, there was a

concerted effort by the Bureau of the Census to improve the industry coding of the administrative records by mailing a nature-of-business inquiry to establishments whose industry codes could have been affected by the 1972 revision to the SIC. Similar efforts were made in 1977, 1982, and 1987 to clarify the classification of firms which SSA had not been able to code precisely.

**Planning the content of questionnaires**—As in previous censuses, the content of the 1987 questionnaires was developed in consultation with a large number of organizations and individuals, representing both the mineral concerns who supply the data and those who use the statistics. Those consulted included Government agencies, individual firms, the American Statistical Association, the American Economic Association, the American Marketing Association, and all mining associations covering specific industries.

Many individual mining companies and their trade associations were consulted about the content of the sections of the report forms dealing with the output of specific products. Drafts of the proposed 1987 product sections were circulated among trade associations and mining companies. These draft report forms included new product detail reflecting suggestions received by the Bureau of the Census after the 1982 canvass. Items whose total value was \$10 million or less were not retained separately in the list unless they were needed to assure correct classification of other products or were of strategic importance. A restriction was also placed on proposals for new product detail; it was stipulated that the 1987 value of any new product category should exceed \$20 million.

The mining operations were requested to comment specifically on the availability of the data requested in their records and the appropriateness of the product descriptions and units of measure.

The many comments and suggestions received in this clearance procedure were evaluated by the census staff. A detailed account of the clearance procedure and the

<sup>6</sup>Imputation was only about 2 percent of overall totals.



decisions reached was forwarded to the Office of Management and Budget, along with the product sections developed by the Bureau of the Census as a result.

A final review was made by the Office of Management and Budget with the assistance of the Advisory Council on Federal Reports. The latter organization is a group of business executives such as controllers, economists, and market research directors, representing a cross section of all industries.

## 14. REPORTING FORMS

A representative selection of the reporting forms used in the census are discussed below.<sup>7</sup>

**General forms**—This group of forms was used in the economic censuses, either as company-wide reports or as reports for establishments whose classification was not known precisely in advance of mailing.

**NC-9901, Report of Organization**—This company-wide report was used prior to mailing the 1987 census questionnaires to develop the directory of establishments operated by multiunit companies. A more detailed account of their use is given in item 15, Mailing Lists.

**NC-9920, Listing of Additional Establishments**—This form was included with the economic censuses forms mailed to multiestablishment companies to obtain a list of establishments that were acquired after the NC-9901 was filed. These additional plants were classified, added to the NC-9901 directory list, and mailed the appropriate 1987 economic censuses report forms.

**NC-9923, General Schedule**—This questionnaire was designed to obtain information from small companies for which the industry code available in the SSA records was not precise enough to indicate which one of the standard census questionnaires should be mailed. The information provided on form NC-9923 was used to classify these companies by industry and tabulate their data in the appropriate census.<sup>8</sup>

**ES-9200, Auxiliary Establishment Report**—Many multiestablishment companies maintain separate establishments to provide centralized administrative, management, or other supporting services for other establishments of the same company, but not for the general public or other companies. They were asked to complete form ES-9200 for those establishments. The form contained questions on the approximate number of employees engaged in such functions as centralized administration, research and development, warehousing, and other auxiliary activities, and on the cost of research and development work performed by

these nonmining establishments. The respondent also was asked to describe the industry activity of the operating establishments serviced by the auxiliary unit reporting on form ES-9200.

**ES-9100, Enterprise Summary Report**—Each large multiestablishment company received a form ES-9100, in addition to a specific questionnaire for each establishment. The ES-9100 requested consolidated company totals for receipts, new capital expenditures, inventories, and fixed assets, which are published as part of the Census Bureau's Enterprise Statistics Program described in item 8.

**Census of mineral industries forms and instruction manuals**—The questionnaire and instructions reproduced in the appendix, form MC-1403, is typical of the 10 long forms used for operating mining establishments. Each of these forms was designed to be used for a specific group of industries. The inquiries on the 10 long forms were identical except for the detailed questions on products shipped, materials used, assets for oil and gas extraction industries, and miscellaneous topics such as operations performed and metal contents of complex ores.

**Short form**—The stone and sand and gravel industries include a large number of small-to-medium sized firms that account for a significant portion of the industry's output. Usually these firms are not so small that the limited data in the administrative-record files would meet the needs of the census. To obtain sufficient data, yet hold the reporting burden down for these smaller firms, a special abbreviated short form was designed (MC-1471). Key input and output statistics were obtained without the detail requested on the standard form.

## 15. MAILING LISTS

**General**—As discussed in item 13, the list of respondents for 1987 was obtained from IRS-SSA records. Since the IRS-SSA lists consist essentially of the names and addresses of companies rather than establishments,<sup>9</sup> it was necessary to follow separate procedures for multiestablishment companies (those operating at more than one location).

**The prec canvass**—Multiestablishment companies were required to file at least one establishment report<sup>10</sup> covering

<sup>7</sup>Samples of general forms and mineral industry forms are reproduced in appendix E.

<sup>8</sup>Use of form NC-9923 is also discussed in item 15, Mailing Lists.

<sup>9</sup>SSA records for multiestablishment companies identify "reporting units," which, in many instances, correspond to census establishments. Differences are such, however, that it was found necessary to obtain up-to-date lists of establishments as described in this section. Also, the Bureau of the Census concept of a company differs from IRS-SSA definition, since the Census company includes all establishments under common ownership or control. In IRS-SSA records, subsidiary corporations are often treated as independent companies.

<sup>10</sup>If two or more distinct lines of activity were carried on at one location, separate reports were obtained under some circumstances. (For a complete discussion, see SIC Classification of Establishments, item 11.)



each location. In order to mail the appropriate questionnaires it was necessary to determine the type of activity at each location operated by multiestablishment companies. The Bureau of the Census conducts an annual update of its directory of establishments operated by large companies in which "Report of Organization" (form NC-9901) is mailed each year to known multiestablishments.

This form consists of a report on company affiliation and a list of the domestic establishments operated by the company. The company's establishments as identified in census records are prelisted and the respondents are asked to correct this list. They are also asked to describe new establishments not prelisted and indicate their size.

Large multiestablishment companies are segregated for special handling because of possible overlap and duplication. Many of these companies are active in manufacturing, retail, and wholesale trade as well as in mining. The reporting instructions are reviewed in discussions with officials of the accounting departments of many of these firms to make certain that the procedure is understood and the establishments are properly described on form NC-9901.

**Single-establishment companies**—The mailing lists for single establishment companies (those operating at only one location) were developed from an initial control file assembled from IRS and SSA records. Out-of-scope companies (those whose activities were not to be surveyed in the economic censuses) and those identified as multiestablishments in the multiestablishment directory were removed.

The final step was to identify the small companies to which forms were not to be mailed because census-type statistics were to be developed from administrative records. The remaining records constituted the mailing lists for single-establishment companies.

**General schedule**—While these lists generally contained adequate industry information to determine the proper form for mailing, a number of the records did not have precise industry information. Form NC-9923, General Schedule, was mailed to these companies. Since it was assumed that these companies were quite small, only the dollar volume of business was requested. The completed reports were coded and included in the tabulations. If form NC-9923 indicated that the company was actually large, it was later requested to file one or more of the appropriate standard questionnaires.

## 16. COVERAGE AND ACCURACY

Since the list of companies obtained from IRS and SSA records was considered to be complete, no field coverage check was conducted. The prec canvass and other special procedures for multiestablishment companies described in Item 15, Mailing Lists, and Item 18, Data Collection, were designed to secure complete lists of establishments, thereby

amplifying the IRS-SSA company list. Control totals, in terms of employment and payrolls of multiestablishment companies, also were used to verify the completeness of establishment coverage.

Comparison of statistics tabulated from the census of mineral industries with data originating with other agencies was possible in many instances, thus providing a further confirmation of completeness and accuracy. In the industry reports, differences between the census of mineral industries and other statistics are explained wherever possible. Census of mineral industries' comparability with broad measures (such as National income, new capital expenditures, and production indexes) is discussed elsewhere in this introduction. The Bureau of the Census' other procedures designed to improve the accuracy of the census data are discussed below in the items of data collection and processing.

## 17. GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required in order to tabulate the minerals census data by State and county. Prior to the census, the mailing address information was matched by computer to geographic reference files in order to assign geographic codes. The reference files were the Address Reference File, which contained about 2.2 million street and building records with their associated ZIP, State, county, and place codes, and the City Reference File, which contained over 90,000 possible combinations of post office names, State abbreviations, and ZIP Codes with their related State, county, and place codes.

The computerized geographic coding system assigned codes to each establishment by matching the street address to the Address Reference File whenever possible. If this was not possible, geographic codes were assigned by matching the post office name, State, and ZIP Code to the City Reference File. Computer file flags were assigned to indicate how confident we were of the codes assigned. Large establishments with low confidence codes were researched clerically.

As in previous censuses, a post office box address or ZIP Code of the establishment was not accepted as defining the physical location. Respondents were requested to check the address labels on the questionnaires and if incorrect or with a nonphysical location address (such as post office box) to provide the following information; street address, place (post office name), State abbreviation, ZIP Code, county name, type place, and whether the establishment was located inside or outside the legal boundaries of the place. Any changes and corrections that were returned were noted and geographically coded accordingly.

Because of the unique establishment definitions in mineral industries and the rural locations of mining establishments in general, geographic coding is particularly difficult. In these cases, the name or number of the nearest highway and the distance from the nearest town or urban place was requested.



## 18. DATA COLLECTION

Although the greater use of administrative records in 1987 substantially reduced the number of companies canvassed directly, there remained over 2 million that were required to file, including about 19,500 mineral operations; small mineral operators for whom the administrative records sufficed numbered about 12,500. The assembly of several hundred different questionnaires into mailing packages was an extensive operation.

Most of the 1987 questionnaires were mailed by late December 1987, with a due date of February 15, 1988. The collection phase was completed by late August 1988. Companies which did not return their questionnaires by the due date had to be reminded that their returns were overdue. In all, there were five mail followups. Telephone calls were made to the large companies to help with reporting problems and to request that the forms be completed and returned.

Estimates based on data from administrative records were included in the census tabulations for the relatively small number that had not responded by the closeout date in August 1988. Thus, reported or estimated data for all companies and establishments in the original mailing list (except those determined to be inactive during 1987) were included in the final statistical results. A special effort was made to obtain actual returns from all large firms, so that the dollar volume of business represented by proxy returns was relatively small.

## 19. DATA PROCESSING

**General**—The editing,<sup>11</sup> coding, and tabulation of data for the 6 million establishments represented in the 1987

<sup>11</sup>In data processing, the term editing means the review of information collected on questionnaires or from other sources, with the objective of locating and correcting erroneous entries.

## III. COMMENTS ON STATISTICAL MEASURES AND TABLES

(Explanations and definitions of the various measures of activity for which statistics are compiled in the census of mineral industries are presented in appendix A. In the following text, the limitations and other characteristics of some of these measures are discussed, the content of the statistical tables is described, and comparisons with other statistical series are presented.)

## 20. ESTABLISHMENTS DURING THE YEAR AND AT THE END OF THE YEAR

The establishment data shown as "Establishments during year" in the tables represent all establishments of companies with one paid employee or more that have production, development, or exploration activities at any time during the year. Also included are separately operated auxiliary establishments. Of the approximately 33,600 establishments with such activities during the year, 33,000 or 98 percent of them were also operating at the end of the year.

economic censuses were complicated tasks. Automated data processing and other advanced techniques were used in all phases.

The questionnaires were mailed from and returned to the Bureau of the Census office at Jeffersonville, Indiana, where most noncomputer (that is, clerical) processing operations were performed. Data were placed on a key-to-disc system, and the encoded data sent to Washington on a high-speed transmission system. The Washington, DC staff handled computer operations and all operations in connection with the use of IRS and SSA records.

**Preliminary processing**—After they were checked in, the questionnaires were keyed and subjected to simple edits to see that they conformed to certain minimum requirements before further processing. For multiestablishment companies, the sums of employment and payroll reported on its establishment questionnaire were compared with the control totals received on IRS form 941. Questionnaires received from single-establishment firms were reviewed to ascertain whether they had become multiestablishments through merger or acquisition. Questions arising in these operations were resolved by writing or telephoning the respondents. Complex problems were referred to the Washington, DC professional staff.

**Computer editing**—The review for consistency among data items and completeness was done on the computer. Average values and tolerance limits for key operating ratios (for example, cost of materials per dollar of shipments, payroll per employee, production-worker wages per hours worked, etc.) played a fundamental role in the editing process.

A detailed description of the step-by-step processing procedures appears in the Bureau of the Census publication, *History of the 1987 Economic Censuses*. This volume describes the procedures followed in both the centralized overall processing and in the individual censuses such as mineral industries.

## 21. EMPLOYMENT AND PAYROLL IN AUXILIARIES

Employment, payroll, and establishment counts of auxiliaries are included in all tables of the census of mineral industries. Table 8 in chapter 2 and table 4 in chapter 3 of this report show employment and payroll data separately by industries and States.

## 22. SUPPLIES CONSUMED

Every establishment was requested to report the total cost of supplies. In addition, quantity and cost information



were collected for approximately 50 specific supplies. Supplies were generally collected only in those industries in which the supplies were important inputs. Detailed consumption information was collected in item 17B of the questionnaire, the standard supplies inquiry. The resulting statistics are presented mainly in table 7a of the industry reports.

In using the detailed data on supplies consumed, the following limitations should be noted:

1. Supplies were reported for the establishment as a whole, and no attempt was made to ascertain how much of the material was used in each of various products. Thus, the industry total for supplies appearing in tables 7a of the industry reports includes consumption in secondary products as well as primary products of the industry. The extent of secondary production in each industry is shown in table 5, chapter 2 of this report.
2. Special attention should be paid to the codes ending in "000" and captioned "Undistributed minerals, purchased machinery, parts, attachments and supplies used." The amounts appearing on these lines are totals imputed for:
  - a. Establishments whose statistics were developed from administrative records.
  - b. Establishments whose reports were not received at the time the data were tabulated.
  - c. Totals for establishments that returned report forms but failed to report their consumption in specific terms.

Thus, for most industries, the data for specific supplies are understated. A judgement on the statistical significance of the understatement may be made from the ratio of the value shown for the "not specified by kind" (code 000) to the total of selected supplies, minerals received for preparation, and purchased machinery installed for the industry.

1. Establishments consuming less than a specified amount of a supply were not requested to report consumption of the supply separately. For the majority of individual supplies, the minimum amount was \$25,000. The use of this cutoff is not believed to have had a significant effect on the totals; in 1977, a lower cutoff of \$10,000 was used.
2. A total of "not elsewhere classified" (n.e.c.), supply code 970099, was collected on most forms and is published for each industry. This is the total cost of supplies for an industry for which no supply items were prelisted on the form.

## 23. VALUE OF SHIPMENTS AND RECEIPTS

**Value of shipments of multiestablishment companies**—Respondents were instructed to report net selling values, f.o.b. mine, well, or plant, after discounts

and allowances and excluding freight charges and excise and sales taxes. Multiestablishment companies were instructed to report for each establishment as if it were a separate economic unit and, in particular, to report interplant transfers at their full economic value. Full economic value is defined as not only the cost of production but also a reasonable proportion of company overhead and profits. Generally, there is no advertising or other selling cost assigned by companies to interplant transfers, so it would be expected that the value per unit of such transfers would be less than that for commercial sales. To assure consistency in the valuation as the interplant transfer moved through the company, the plant receiving the transferred goods was instructed to include them in its cost of materials at the same value as at the shipping point plus the cost of freight and other handling charges.

**Individual products**—In the 1987 census program, information was collected on the output of 180 individual product items.<sup>12</sup> A "product," as used in the census of mineral industries, is the finest level of detail for which output information was requested. It is not necessarily synonymous with the term "product" as used in the marketing sense. In some cases, it may be much more detailed, and in other cases, it is more aggregative. If detailed production figures are available from other government sources or reliable private surveys, it was not considered necessary to request extensive detail in the census. Frequently, large aggregative values at the products level indicated that detailed production figures were available from other statistical programs.

Typically, both quantity and value of shipments were collected. However, physical quantity measures are not meaningful for some product lines, and for these, only value of shipments was collected. If a product was used to a large degree in the fabrication of other products within the same establishment in which it was produced, total quantities produced and often the quantities consumed were collected. Information on production, as well as shipments, was also collected for products for which there are significant differences between the two in a given year.

**Classes of products**—The individual products were aggregated into classes of products which were, in turn, grouped into all primary products of each industry. In the code structure, a seven-digit number is assigned to the individual product, a five-digit code to the class of product, and a four-digit code to the total primary products in an industry. (See item 11 for application of coding structure to the assignment of SIC codes for establishments.)

The 180 product items in the 1987 census were grouped into 75 separate product classes. General similarity was the basis for the product class combinations within each four-digit industry; i.e., kind or use of the products. The

<sup>12</sup>See 1987 Census of Manufactures and Census of Mineral Industries, MC87-R-1, **Numerical List of Manufactured and Mineral Products**.



economic significance of the class was also taken into account; residual products of an industry were grouped when the dollar value of the products did not warrant separate classes.

**Effect of use of administrative records on product data**—As noted elsewhere in this Introduction, approximately 12,500 small mining companies were not mailed report forms and most of their detail was imputed based on limited information in IRS and SSA administrative records used in conjunction with industry averages and other information. All of the value of products of these small establishments were coded only to the four-digit products of the industry in which they were classified. These product shipments are uniquely identified in table 6 of the industry reports. Also included are product shipments of reporting companies that were described too generally to code below the four-digit level. Frequently, these were residuals in the company's records which the company felt it could not further break down.

One factor tends to reduce the value of products, n.s.k., attributed to administrative-record companies. In some four-digit industries, there is only one product category (an example is Industry 1422, Crushed and Broken Limestone). Administrative-record estimates for these products were treated as specific information and not published as "n.s.k."

In using the data for the specific seven-digit products shown in table 6 of the industry reports, the importance of the "n.s.k." has to be considered. The shipments of individual products tend to be understated somewhat in proportion to the size of the "n.s.k." Census-to-census comparison of seven-digit products should be made with caution if there has been a significant increase or decrease in the importance of the "n.s.k."

## 24. VALUE ADDED BY MINING

**General**—Value added is computed by subtracting the cost of supplies, purchased fuels and electric energy, contract work, purchased machinery installed, and minerals received from other establishments and used in mineral production from the value of shipments and receipts plus capital expenditures. This measure avoids the duplication in the value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by other establishments. Moreover, it provides a measure of value added in mineral production and also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

"Value of shipments and receipts," used in this calculation, includes the shipments of all products of the mining establishment, together with receipts for work done for others. "Capital expenditures" includes expenditures for development of mineral properties as well as for new

construction and major alterations of preparation plants and other structures and expenditures for new and used machinery and equipment. The "costs" used in this calculation include costs charged to both the current and capital accounts. Both the shipments and costs figures include products bought and resold in the same condition.

**Value added and gross national product**—The measure of value added produced by the Bureau of the Census differs from the estimate of gross product originating (GPO) in mining, which is included in the U.S. income and product accounts, prepared by the Bureau of Economic Analysis (BEA) of the Commerce Department. As explained below, these measures are conceptually and statistically different.

Recall that Census value added is calculated as the value of shipments and receipts plus capital expenditures, less the cost of supplies used in exploration, development, and production. The cost of purchased services is not excluded from this value. On the other hand, GPO in mining is that industry's share of the Nation's output of goods and services valued at market prices before deductions for depreciation charges. It is calculated either as:

1. The sum of income payments (for example, wages, profits, and interest) and other costs (e.g., depreciation and indirect business taxes).
2. The difference between the value of production and the cost of materials and services used in production.

GPO differs from the census value added not only because the BEA measure excludes purchased services, but also because it includes sales and excise and other indirect business taxes other than property taxes, and reflects inventory change valued at replacement cost. These differences arise because the Census Bureau:

1. Does not collect data for all purchased services.
2. Defines shipments to exclude excise and sales taxes.
3. Calculates inventory change using data as reported by the mining establishment.

The BEA adjusts inventories of establishments as reported to the Census Bureau with a relevant inventory valuation adjustment (IVA) factor, which converts them to a replacement cost valuation to make them consistent with the definition of gross national product.

A direct reconciliation of the Census value added and GPO measures is not possible for a number of reasons. For example, of the three differences mentioned above, the GPO measure provides separate estimates of only the taxes and the IVA. Estimates of purchased services are not available because the BEA calculates GPO using the sum of income payments and costs method. Furthermore, the different sources of data used by the Census Bureau to



compute value added and by the BEA to estimate GPO give rise to statistical differences between the two series, especially at the more detailed industry levels. Some of the income and cost components of GPO are available only on a consolidated company-industry basis. Profits and depreciation, which are based on tabulation of income tax returns, also are converted by BEA. However, because current income tax data are not available and because of problems with the conversion procedures used by BEA, the resulting establishment-industry distributions may have significant errors, especially at the two-digit SIC industry levels. For net interest, another component of GPO derived from tax return information, no such conversion is attempted. Another statistical difference, which is a major factor at the two-digit industry levels, is the industry classification underlying the estimates of wages and salaries. Census collects wages and salaries directly from employers, while the BEA uses Bureau of Labor Statistics (BLS) tabulations of wages paid to employees covered by unemployment insurance. While both systems use the SIC as the basis of classification, differences arise because Census and BLS use different information upon which to base the classification of individual establishments. Finally, the BEA measure includes the GPO of nonemployer firms. These firms, which are not covered in the Census of Minerals, are usually very small and do not constitute a significant share of GPO.

## 25. CAPITAL EXPENDITURES AND GROSS ASSETS

**Capital expenditures**—Under this heading, mining establishments were instructed to report expenditures of the type chargeable to fixed assets accounts for which depreciation reserves are normally maintained. Actual capital outlays during the year were requested, not the final value of equipment put in place or structures completed during the year. Included in such expenditures totals are expenditures for development and exploration of mineral properties. Excluded are cost of maintenance and repair charged to current operating expense, and cost of land and mineral rights.

The Bureau of the Census estimates of capital expenditures tend to be lower than those published by the Bureau of Economic Analysis. The major source of difference results in the scope of the two series. Census data relate only to mining establishments, whereas the BEA-SEC series relating to mining includes all establishments of mining companies, nonmining as well as mining, but excludes mining establishments of companies that they have classified as chiefly nonmining.

**Gross value of fixed assets**—In addition to reporting capital expenditures during the year, assets data were collected on buildings, other structures, machinery, equipment, capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion accounts are maintained, along with

depreciation and/or depletion and retirements during the year. As the Census capital expenditure series differs from the BEA series, the Census gross asset series will differ from similar series based on company level reports; i.e., those appearing in the IRS *Statistics of Income* and the Bureau of the Census *Quarterly Financial Report of Corporations*. (See appendix A for more complete definition of terms.)

## 26. INVENTORIES

The value of end-of-year inventories held by each mining establishment was obtained for 1986 and 1987. For the majority of the mineral industries, separate information was requested for:

1. Mined or quarried products.
2. Supplies, parts, fuels, etc.

A measure of the changes in mined or quarried product inventories from the beginning to the end of each is essential to the conversion of value of shipments during the year to value of production. The ratios of inventories to shipments at different times also are used in analysis of trends and business-cycle movements. For the best use of all of these measures, the inventories should be valued in the same prices as the shipments are valued.

The inventories, as collected in 1977, have been the inventories as carried in the books of each respondent. Beginning in the 1982 Census of Mineral Industries, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from the 1977 census when respondents were permitted to value their inventories using any generally accepted accounting method. The inventory figures for 1982 and 1987, therefore, will not be comparable to prior census data because of the change in reporting instructions.

In using inventory data by stage of production for all industries at the industry level, it should be noted that an item treated as a mined or quarried product by an establishment in one industry may be reported as a raw material by another establishment in a different industry. Such differences are present in the inventory figures by stage of production shown for individual industries, industry groups, and “all mining” which are merely aggregates of figures reported by establishments in specified industries.

## 27. CONFIDENTIALITY

The Bureau of the Census is prohibited by law from publishing any statistics that disclose information reported by individual companies. However, the number of companies classified in a given industry is not considered a disclosure, so this item may be given even though other information is withheld. In suppressing figures to avoid disclosing information of individual companies, individual



States are given precedence over geographic regions and divisions. This change was initiated in 1977. In prior censuses, the large geographic areas were given precedence. As a result of this change in philosophy, it has become more difficult to produce industry detail for the larger geographic areas, and data for these areas are no longer published. States are given precedence over counties.

In tables showing industry detail, major industry group (two-digit totals take precedence over industry group (three-digit) totals which, in turn, take precedence over individual (four-digit) industries. Similarly, in product tables, four-digit product groupings take precedence over five-digit product classes and the latter over individual seven-digit products.

Such order of precedence was used because:

1. It was considered preferable to show State data for an industry, even at the cost of withholding data for a region. In recent years, there seemed to be more need for and use of data for individual States than for the larger regions especially since many regional development programs encompassed clusters of States different from the standard regions and divisions.
2. By giving preference to industry-group statistics over individual industries within each State, the extent to which individual States can be compared within the SIC industry classification framework is greatly increased.

The disclosure analysis for the State statistics in the tables of this report is based on the total value of shipments and receipts and capital expenditures. Whenever the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line has been suppressed. If capital expenditures alone is a disclosure, only total capital expenditures and cost of supplies statistics are suppressed. However, the suppressed data are included in higher level totals.

## 28. SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Mineral Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as the regular publications. Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief, Industry Division, Bureau of the Census, Washington, DC 20233.

## 29. ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

–	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, and bbl, are used in the customary sense. Where the term “tons” only is used, it refers to short tons of 2,000 pounds; where the figures are expressed in tons of 2,240 pounds, the unit of measure is specified as “long tons” or “I tons.”

## 30. CONTACTS FOR DATA USERS

Subject Area	Contact	Phone
Mineral Industries–Five-year industry and product statistics	Minerals Branch Industry Division Bureau of the Census	(301) 763-5938
Mineral Industries–Annual product statistics (domestic and international) except fuels	Bureau of Mines Metals Nonmetallic minerals International	(202) 634-1055 (202) 634-1202 (202) 632-8970
Mineral Industries– Coal and oil and gas production	National Energy Information Center (NEIC) staff Department of Energy	(202) 586-8800
To order any Census Bureau publication	Customer Services (DUSD) Bureau of the Census	(301) 763-4100
Import/Export publications	Foreign Trade Division	(301) 763-5140

# CHAPTER 1. Historical Statistics

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**Table 1. Historical Statistics: 1987 and Earlier Census Years**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)
	Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
1987 <sup>1</sup> -----	33 617	6 299	698.1	21 739.1	451.1	942.2	12 443.2	110 959.1	62 423.4	157 964.3	15 418.2
1982 <sup>1</sup> -----	42 241	(NA)	1 113.6	28 637.5	762.2	1 577.9	18 030.1	188 055.0	109 697.4	249 999.6	47 752.8
1977 <sup>1</sup> -----	31 359	6 632	798.8	13 166.8	592.8	1 183.3	9 082.3	68 013.1	46 079.4	96 374.7	17 718.0
1972 <sup>1</sup> -----	25 269	5 312	595.1	6 225.5	442.9	909.0	4 250.2	26 470.6	14 864.0	36 318.6	5 035.9
1967 <sup>1</sup> -----	28 579	5 682	567.3	4 188.8	432.6	892.0	2 888.2	19 330.2	10 576.2	<sup>2</sup> 322 783.6	4 057.8
1963 -----	38 651	5 499	615.6	3 742.5	481.5	973.0	2 679.5	15 910.0	8 974.0	<sup>3</sup> 18 804.4	3 263.6
1958 -----	36 392	6 045	733.9	3 749.0	565.4	1 080.5	2 623.0	13 385.2	7 521.0	<sup>2</sup> 16 373.1	2 804.1

<sup>1</sup>Beginning with 1967, data for single-establishment companies without paid employees were excluded from the census.

<sup>2</sup>Represents net value of shipments and receipts.

<sup>3</sup>Includes gross shipments for ferroalloy ores and metallic ores, n.e.c. In 1963, difference between gross and net shipments for these industries was about \$7.6 million.



**Table 2. Statistics for Industry Groups and Industries: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group and industry	1987									
		Companies (number)	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)
			Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)		
	<b>All industries</b> .....	<b>25 218</b>	<b>33 617</b>	<b>6 299</b>	<b>698.1</b>	<b>21 739.1</b>	<b>451.1</b>	<b>942.2</b>	<b>12 443.2</b>	<b>110 959.1</b>	<b>62 423.4</b>
<b>10</b>	<b>Metal mining</b> .....	<b>639</b>	<b>1 027</b>	<b>260</b>	<b>44.1</b>	<b>1 353.5</b>	<b>33.7</b>	<b>67.8</b>	<b>952.0</b>	<b>4 609.5</b>	<b>3 141.2</b>
101	Iron ores .....	39	51	16	7.1	224.2	5.6	11.2	165.8	767.9	618.5
1011	Iron ores .....	39	51	16	7.1	224.2	5.6	11.2	165.8	767.9	618.5
102	Copper ores .....	27	61	33	13.9	404.8	10.6	20.9	282.7	1 301.3	1 053.4
1021	Copper ores .....	27	61	33	13.9	404.8	10.6	20.9	282.7	1 301.3	1 053.4
103	Lead and zinc ores .....	21	39	19	2.0	58.3	1.4	3.0	40.0	176.2	104.1
1031	Lead and zinc ores .....	21	39	19	2.0	58.3	1.4	3.0	40.0	176.2	104.1
104	Gold and silver ores .....	299	372	101	13.1	423.0	10.4	21.4	305.0	1 814.2	1 001.4
1041	Gold ores .....	260	319	91	11.4	371.5	8.9	18.2	263.8	1 689.1	920.6
1044	Silver ores .....	45	53	10	1.7	51.5	1.5	3.1	41.2	125.1	80.8
106	Ferroalloy ores, except vanadium .....	51	58	7	1.3	46.2	.8	1.5	24.2	61.1	56.3
1061	Ferroalloy ores, except vanadium .....	51	58	7	1.3	46.2	.8	1.5	24.2	61.1	56.3
108	Metal mining services .....	115	268	42	2.8	80.8	2.2	4.6	59.8	175.6	101.3
1081	Metal mining services .....	115	268	42	2.8	80.8	2.2	4.6	59.8	175.6	101.3
109	Miscellaneous metal ores .....	127	178	42	3.8	116.3	2.7	5.2	74.5	313.1	206.2
1094	Uranium-radium-vanadium ores .....	59	101	27	2.3	72.1	1.5	2.9	43.6	174.7	115.8
1099	Miscellaneous metal ores, n.e.c. ....	72	77	15	1.6	44.1	1.2	2.3	30.9	138.4	90.4
<b>12</b>	<b>Coal mining</b> .....	<b>2 914</b>	<b>3 905</b>	<b>1 418</b>	<b>163.4</b>	<b>5 567.0</b>	<b>128.7</b>	<b>259.3</b>	<b>4 251.4</b>	<b>17 067.9</b>	<b>10 552.5</b>
122	Bituminous coal and lignite mining .....	2 589	3 507	1 335	157.5	5 410.2	123.8	249.5	4 125.3	16 678.9	10 282.1
1221	Bituminous coal and lignite surface mining .....	1 367	1 804	612	63.8	2 204.0	48.0	99.5	1 580.1	7 893.7	6 460.3
1222	Bituminous coal underground mining .....	1 302	1 703	723	93.7	3 206.1	75.8	149.9	2 545.2	8 785.2	3 821.8
123	Anthracite mining .....	88	107	26	1.9	41.2	1.6	2.9	32.4	109.4	109.0
1231	Anthracite mining .....	88	107	26	1.9	41.2	1.6	2.9	32.4	109.4	109.0
124	Coal mining services .....	254	291	57	4.0	115.7	3.3	6.8	93.7	279.6	161.4
1241	Coal mining services .....	254	291	57	4.0	115.7	3.3	6.8	93.7	279.6	161.4
<b>13</b>	<b>Oil and gas extraction</b> .....	<b>17 875</b>	<b>22 910</b>	<b>3 167</b>	<b>377.9</b>	<b>11 960.5</b>	<b>206.2</b>	<b>437.3</b>	<b>5 283.3</b>	<b>80 048.8</b>	<b>44 031.7</b>
131	Crude petroleum and natural gas .....	8 120	10 203	1 171	198.8	7 510.0	69.4	142.3	2 153.8	67 954.9	19 112.2
1311	Crude petroleum and natural gas .....	8 120	10 203	1 171	198.8	7 510.0	69.4	142.3	2 153.8	67 954.9	19 112.2
132	Natural gas liquids .....	97	714	210	12.7	433.0	9.7	20.2	320.0	4 024.9	21 107.4
1321	Natural gas liquids .....	97	714	210	12.7	433.0	9.7	20.2	320.0	4 024.9	21 107.4
138	Oil and gas field services .....	9 772	11 993	1 786	166.5	4 017.5	127.1	274.8	2 809.5	8 068.9	3 812.1
1381	Drilling oil and gas wells .....	2 060	2 591	620	55.0	1 318.0	45.6	93.3	1 012.3	2 549.4	1 397.5
1382	Oil and gas field exploration services .....	1 591	1 917	143	16.9	452.1	12.8	27.1	310.7	771.3	394.1
1389	Oil and gas field services, n.e.c. ....	6 239	7 485	1 023	94.6	2 247.5	68.7	154.3	1 486.4	4 748.2	2 020.4
<b>14</b>	<b>Nonmetallic minerals, except fuels</b> .....	<b>3 975</b>	<b>5 775</b>	<b>1 454</b>	<b>112.7</b>	<b>2 858.0</b>	<b>82.5</b>	<b>177.9</b>	<b>1 956.4</b>	<b>9 232.9</b>	<b>4 698.0</b>
141	Dimension stone .....	130	149	19	1.3	24.5	1.1	2.0	17.7	64.7	25.2
1411	Dimension stone .....	130	149	19	1.3	24.5	1.1	2.0	17.7	64.7	25.2
142	Crushed and broken stone, including riprap .....	1 129	2 002	711	43.7	1 081.8	32.8	72.4	753.8	3 465.3	1 823.3
1422	Crushed and broken limestone .....	714	1 335	456	28.9	702.3	21.6	47.0	482.9	2 091.4	1 161.8
1423	Crushed and broken granite .....	104	238	129	6.5	168.6	5.0	11.7	120.4	696.2	339.2
1429	Crushed and broken stone, n.e.c. ....	357	429	126	8.3	210.9	6.2	13.7	150.5	677.8	322.3
144	Sand and gravel .....	2 192	2 750	436	32.8	772.0	23.9	51.1	550.8	2 319.9	1 056.7
1442	Construction sand and gravel .....	2 087	2 559	371	28.9	673.0	21.1	45.4	489.3	2 011.6	899.3
1446	Industrial sand .....	121	191	65	3.9	98.9	2.8	5.7	61.5	308.3	157.4
145	Clay, ceramic, and refractory minerals .....	122	197	100	9.9	272.2	7.1	15.3	165.2	827.2	532.7
1455	Kaolin and ball clay .....	24	45	36	5.3	169.5	3.5	7.9	95.8	498.6	328.9
1459	Clay, ceramic, and refractory minerals, n.e.c. ....	105	152	64	4.6	102.7	3.5	7.4	69.5	328.6	203.9
147	Chemical and fertilizer mineral mining .....	101	148	79	16.3	500.8	11.6	24.4	335.9	1 998.9	964.6
1474	Potash, soda, and borate minerals .....	25	30	19	6.9	234.5	5.3	11.4	177.0	915.0	439.1
1475	Phosphate rock .....	32	39	26	5.3	139.5	3.9	7.7	92.5	595.1	365.9
1479	Chemical and fertilizer mineral mining, n.e.c. ....	52	79	34	4.2	126.7	2.5	5.3	66.4	488.7	159.6
148	Nonmetallic minerals services, except fuels .....	152	177	23	1.8	44.9	1.3	2.8	31.9	119.0	71.8
1481	Nonmetallic minerals services, except fuels .....	152	177	23	1.8	44.9	1.3	2.8	31.9	119.0	71.8
149	Miscellaneous nonmetallic minerals, except fuels .....	304	352	86	7.0	161.9	4.8	9.8	101.1	438.0	223.7
1499	Miscellaneous nonmetallic minerals, except fuels .....	304	352	86	7.0	161.9	4.8	9.8	101.1	438.0	223.7

1987—Con.				1982						1987 SIC code
Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	Inventories		All employees		Value added by mining (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)		
		End of year (million dollars)	Beginning of year (million dollars)	Number (1,000)	Payroll (1,000)					
157 964.3	15 418.2	7 380.0	7 584.0	1 113.6	28 637.5	188 055.0	249 999.6	47 752.8		
6 851.6	899.1	1 171.7	1 162.3	68.1	1 860.3	3 214.4	5 287.2	1 160.9	10	
1 362.4	24.0	214.2	217.3	11.7	339.8	770.3	1 414.3	62.7	101	
1 362.4	24.0	214.2	217.3	11.7	339.8	770.3	1 414.3	62.7	1011	
2 149.7	205.0	354.4	321.0	21.9	603.6	671.7	1 550.6	422.6	102	
2 149.7	205.0	354.4	321.0	21.9	603.6	671.7	1 550.6	422.6	1021	
268.3	11.9	33.6	38.5	4.3	111.8	200.6	318.3	56.8	103	
268.3	11.9	33.6	38.5	4.3	111.8	200.6	318.3	56.8	1031	
2 260.9	554.7	264.4	219.7	10.4	262.7	649.7	741.4	237.5	104	
2 067.1	542.6	219.1	171.9	7.7	187.9	479.2	521.1	204.5	1041	
193.8	12.2	45.3	47.8	2.6	74.8	170.6	220.3	33.0	1044	
109.9	7.5	51.8	60.0	4.7	149.8	145.8	205.5	109.5	106	
109.9	7.5	51.8	60.0	4.7	149.8	145.8	205.5	109.5	1061	
251.3	25.7	22.0	21.9	2.5	60.6	89.5	125.4	26.8	108	
251.3	25.7	22.0	21.9	2.5	80.6	89.5	125.4	26.8	1081	
449.0	70.3	231.4	283.9	12.6	332.0	686.8	931.8	245.1	109	
251.5	39.0	189.7	248.0	10.5	285.4	578.8	775.1	223.9	1094	
197.5	31.3	41.6	35.9	2.1	46.6	107.9	156.7	21.2	1099	
25 955.2	1 665.2	1 513.1	1 585.3	251.2	6 805.3	18 631.0	28 554.0	3 222.5	12	
25 346.9	1 614.1	1 451.8	1 524.6	240.9	6 570.1	18 041.2	27 695.4	3 141.3	122	
13 617.5	736.4	812.4	863.0	(NA)	(NA)	(NA)	(NA)	(NA)	1221	
11 729.3	877.7	639.3	661.7	(NA)	(NA)	(NA)	(NA)	(NA)	1222	
206.3	12.1	41.5	41.9	3.4	66.9	171.7	286.6	22.9	123	
206.3	12.1	41.5	41.9	3.4	66.9	171.7	286.6	22.9	1231	
402.0	39.0	19.8	18.8	6.9	168.2	418.1	572.0	58.4	124	
402.0	39.0	19.8	18.8	6.9	168.2	418.1	572.0	58.4	1241	
112 363.0	11 717.4	2 933.1	3 002.6	684.5	17 693.3	159 936.6	207 090.7	42 215.5	13	
76 518.1	10 549.0	2 182.3	2 314.5	264.2	8 084.3	126 035.2	134 969.4	34 280.8	131	
76 518.1	10 549.0	2 182.3	2 314.5	264.2	8 084.3	126 035.2	134 969.4	34 280.8	1311	
24 749.5	382.7	157.4	127.4	14.2	401.9	8 864.8	41 009.6	1 131.1	132	
24 749.5	382.7	157.4	127.4	14.2	401.9	8 864.8	41 009.6	1 131.1	1321	
11 095.4	785.7	593.5	560.7	406.1	9 207.2	25 036.6	31 111.7	6 803.6	138	
3 625.9	321.0	148.1	142.9	165.5	4 006.7	11 315.6	13 797.8	4 205.7	1381	
1 096.2	69.3	68.9	55.3	41.8	809.5	2 306.4	2 960.4	390.8	1382	
6 373.2	395.4	376.4	362.5	198.9	4 391.0	11 414.6	14 353.6	2 207.1	1389	
12 794.5	1 136.4	1 762.1	1 813.8	109.8	2 278.5	6 273.0	9 067.7	1 153.9	14	
85.8	4.0	14.1	12.9	1.5	21.2	50.2	63.8	3.3	141	
85.8	4.0	14.1	12.9	1.5	21.2	50.2	63.8	3.3	1411	
4 768.0	520.6	586.7	578.3	36.8	700.9	1 787.2	2 571.5	269.3	142	
2 914.4	338.7	417.5	402.6	25.8	497.9	1 228.7	1 756.1	184.7	1422	
922.7	112.7	75.0	83.8	4.5	76.7	259.0	384.2	39.1	1423	
931.0	69.2	94.2	91.9	6.5	126.4	299.6	431.2	45.5	1429	
3 139.0	237.6	394.1	376.8	27.8	520.4	1 335.6	1 877.2	211.3	144	
2 696.8	214.1	348.5	327.2	23.4	437.2	1 112.1	1 535.3	170.4	1442	
442.1	23.5	45.6	49.5	4.3	83.2	223.5	341.9	40.9	1446	
1 248.6	111.3	159.3	156.0	10.5	212.0	509.8	886.9	107.3	145	
750.5	77.0	73.9	72.6	5.3	119.5	301.5	529.5	70.1	1455	
498.1	34.4	85.4	83.5	5.2	92.6	208.3	357.3	37.2	1459	
2 772.0	191.5	496.0	580.6	25.6	680.7	2 237.2	3 134.9	519.1	147	
1 271.8	82.3	171.0	194.5	10.5	310.5	954.3	1 290.8	232.9	1474	
886.7	74.3	225.2	275.1	7.8	179.6	732.5	1 047.7	223.0	1475	
613.4	34.9	99.7	110.9	7.4	190.6	550.4	796.5	63.2	1479	
165.4	25.4	10.3	10.1	1.6	34.6	70.4	100.7	6.6	148	
165.4	25.4	10.3	10.1	1.6	34.6	70.4	100.7	6.6	1481	
615.7	46.0	101.6	99.1	6.0	103.6	282.5	432.7	37.0	149	
615.7	46.0	101.6	99.1	6.0	103.6	282.5	432.7	37.0	1499	





# CHAPTER 2. Industry Statistics

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**Table 1. Statistics by Major Group: 1987 and Earlier Census Years**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

SIC code	Major group and year	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
10	<b>METAL MINING</b>											
	1987 <sup>1</sup> .....	1 027	260	44.1	1 353.5	33.7	67.8	952.0	4 609.5	3 141.2	6 851.6	899.1
	1982 <sup>1</sup> .....	1 434	(NA)	68.1	1 860.3	46.8	89.7	1 222.2	3 214.4	3 233.7	5 287.2	1 160.9
	1977 <sup>1</sup> .....	1 206	328	87.6	1 485.4	64.6	128.6	1 032.0	3 503.9	3 005.2	5 369.4	1 139.8
	1972 <sup>1</sup> .....	1 014	285	80.8	852.9	62.9	126.7	621.7	2 381.6	1 535.3	3 515.4	401.5
	1967 <sup>1</sup> .....	1 155	318	70.9	552.4	55.4	113.9	396.1	1 556.6	1 079.4	2 296.2	339.8
	1963 .....	1 614	298	77.2	515.2	62.2	125.7	383.7	1 418.2	941.0	2 128.2	230.9
	1958 .....	2 351	386	91.6	486.2	70.8	136.2	355.0	1 180.2	861.1	1 826.2	215.1
12	<b>COAL MINING</b>											
	1987 <sup>1</sup> .....	3 905	1 418	163.4	5 567.0	128.7	259.3	4 251.4	17 067.9	10 552.5	25 955.2	1 665.2
	1982 <sup>1</sup> .....	5 087	(NA)	251.2	6 805.3	201.3	386.0	5 244.9	18 631.0	13 145.5	28 554.0	3 222.5
	1977 <sup>1</sup> .....	5 451	1 733	245.3	4 170.8	206.8	373.2	3 343.9	11 266.3	8 493.1	16 935.7	2 823.8
	1972 <sup>1</sup> .....	3 595	1 169	159.6	1 777.6	136.0	269.1	1 466.3	3 753.8	2 474.0	5 524.2	703.6
	1967 <sup>1</sup> .....	4 484	1 125	131.6	967.3	115.1	224.0	811.8	2 091.3	1 350.1	3 100.6	340.7
	1963 .....	7 374	1 269	145.6	821.1	128.9	237.1	700.8	1 727.2	1 139.2	2 632.9	233.4
	1958 .....	8 188	1 534	210.7	1 008.5	183.7	299.0	841.5	1 780.2	1 180.8	2 756.0	205.1
13	<b>OIL AND GAS EXTRACTION</b>											
	1987 <sup>1</sup> .....	22 910	3 167	377.9	11 960.5	206.2	437.3	5 283.3	80 048.8	44 031.7	112 363.0	11 717.4
	1982 <sup>1</sup> .....	29 974	(NA)	684.5	17 693.3	434.0	938.6	10 033.0	159 936.6	89 369.6	207 090.7	42 215.5
	1977 <sup>1</sup> .....	18 447	3 128	349.2	5 901.5	230.8	492.6	3 559.9	48 587.0	31 694.5	67 337.7	12 943.8
	1972 <sup>1</sup> .....	14 498	2 393	240.6	2 525.0	154.2	318.7	1 393.4	17 612.1	9 471.1	23 627.2	3 456.1
	1967 <sup>1</sup> .....	16 358	2 681	244.9	1 855.1	167.2	346.5	1 091.4	13 394.3	7 066.2	17 455.9	3 004.6
	1963 .....	21 242	2 448	271.5	1 744.7	192.0	397.3	1 093.0	11 019.8	6 044.4	14 512.5	2 551.7
	1958 .....	18 522	2 691	312.9	1 700.7	214.0	440.3	1 011.2	9 032.5	4 799.5	11 637.9	2 194.0
14	<b>NONMETALLIC MINERALS, EXCEPT FUELS</b>											
	1987 <sup>1</sup> .....	5 775	1 454	112.7	2 858.0	82.5	177.9	1 956.4	9 232.9	4 698.0	12 794.5	1 136.4
	1982 <sup>1</sup> .....	5 746	(NA)	109.8	2 278.5	80.1	163.5	1 529.9	6 273.0	3 948.6	9 067.7	1 153.9
	1977 <sup>1</sup> .....	6 255	1 443	116.9	1 609.0	90.6	188.8	1 146.4	4 655.9	2 886.7	6 731.9	810.7
	1972 <sup>1</sup> .....	6 162	1 465	114.2	1 070.0	89.4	194.7	768.7	2 723.0	1 403.6	3 651.7	474.8
	1967 <sup>1</sup> .....	6 582	1 559	119.9	812.0	94.8	207.6	588.9	2 288.0	1 080.7	2 996.0	372.7
	1963 .....	8 421	1 486	121.2	661.5	98.4	212.8	502.0	1 744.8	849.7	2 346.9	247.5
	1958 .....	7 323	1 436	118.6	553.5	96.8	204.9	415.0	1 391.5	679.5	1 881.1	189.8

<sup>1</sup>Beginning with 1967, data for single-establishment companies without paid employees were excluded from the census.

**Table 2. Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Geographic area and industry group	1987											1982		
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)	
		E <sup>1</sup>	Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
10	Metal mining -----	-	1 027	260	44.1	1 353.5	33.7	67.8	952.0	4 609.5	3 141.2	6 851.6	899.1	68.1	3 214.4
	Alaska -----	E2	39	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	11.2
	Arizona -----	-	94	32	10.4	301.4	8.2	15.6	219.7	873.3	750.1	1 410.6	212.8	14.1	534.5
	Arkansas -----	-	7	2	.2	6.7	.2	.3	4.7	13.4	15.2	27.9	.7	.5	18.9
	California -----	-	99	22	EE	(D)	1.5	3.0	40.1	255.8	114.4	313.0	57.2	EE	(D)
	Colorado -----	E1	123	28	2.7	88.5	1.6	3.4	49.2	161.9	134.0	236.4	59.6	7.3	326.4
	Florida -----	-	5	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Idaho -----	E1	57	12	1.5	48.1	1.2	2.4	33.6	87.3	47.3	122.3	12.4	1.9	116.1
	Michigan -----	-	17	7	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Minnesota -----	-	21	7	4.5	141.6	3.7	7.5	111.5	449.0	422.6	856.6	14.9	7.7	521.3
	Missouri -----	-	13	8	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.6	169.4
	Montana -----	-	44	11	1.7	45.0	1.4	2.9	37.5	196.3	135.1	291.6	39.8	1.5	104.1
	Nevada -----	-	142	53	6.1	192.4	5.0	10.6	151.5	1 050.6	582.6	1 293.1	340.0	3.6	274.7
	New Mexico -----	-	43	8	1.8	55.5	1.5	3.2	47.5	251.6	214.4	452.6	13.4	5.2	223.8
	New York -----	E1	16	7	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Ohio -----	-	11	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.8	6.6
	Pennsylvania -----	E7	14	1	.2	5.3	.1	.2	3.5	8.0	8.9	14.9	2.0	.4	10.3
	South Dakota -----	-	12	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Tennessee -----	-	11	8	1.0	23.0	.8	1.8	18.6	50.1	(D)	95.9	(D)	1.5	36.1
	Texas -----	E1	34	4	.4	11.2	.3	.6	8.0	45.6	34.1	71.9	7.9	1.8	87.6
	Utah -----	-	57	16	2.2	64.1	1.6	3.3	37.9	323.5	(D)	446.2	(D)	FF	(D)
	Washington -----	-	32	5	.6	19.2	.4	.7	10.9	91.1	23.7	102.8	12.0	CC	(D)
	Wyoming -----	-	31	3	.5	15.9	.4	.6	10.0	5.2	18.1	21.6	1.8	2.7	190.6

See footnotes at end of table.



**Table 2. Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Geographic area and industry group	1987											1982		
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)	
		E <sup>1</sup>	Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
10	<b>Metal mining—Con.</b>														
101	<b>Iron ores</b> .....	-	51	16	7.1	224.2	5.6	11.2	165.8	767.9	618.5	1 362.4	24.0	11.7	770.3
	Michigan .....	-	6	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Minnesota .....	-	12	6	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	7.6	515.8
	Missouri .....	-	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Ohio .....	-	2	2	BB	(D)	-	-	-	-	-	-	-	.7	-
102	<b>Copper ores</b> .....	-	61	33	13.9	404.8	10.6	20.9	282.7	1 301.3	1 053.4	2 149.7	205.0	21.9	671.7
	Arizona .....	-	28	18	9.6	278.6	7.6	14.3	203.2	841.6	712.2	1 359.8	194.0	13.4	513.4
	Michigan .....	-	2	1	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	Montana .....	-	1	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	New Mexico .....	-	9	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	29.2
	New York .....	-	2	1	BB	(D)	-	-	-	-	-	-	-	.8	-
	Tennessee .....	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Utah .....	-	9	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
103	<b>Lead and zinc ores</b> ..	-	39	19	2.0	58.3	1.4	3.0	40.0	176.2	104.1	268.3	11.9	4.3	200.6
	Missouri .....	-	9	7	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	New York .....	E1	5	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Pennsylvania .....	E9	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Tennessee .....	-	7	7	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
104	<b>Gold and silver ores</b> ..	-	372	101	13.1	423.0	10.4	21.4	305.0	1 814.2	1 001.4	2 260.9	554.7	10.4	649.7
	Alaska .....	E2	30	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	9.9
	Arizona .....	E8	18	2	.2	7.7	.2	.3	4.6	4.0	7.4	7.4	(D)	.4	5.8
	California .....	-	54	15	1.4	42.0	1.1	2.2	29.9	206.8	82.8	237.8	51.8	1.0	35.3
	Colorado .....	E1	45	13	1.1	35.5	.8	1.6	23.8	81.5	77.6	124.1	35.0	EE	(D)
	Idaho .....	E1	26	7	1.0	31.1	.7	1.5	20.6	64.1	24.4	78.9	9.6	1.5	108.7
	Michigan .....	-	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Montana .....	-	23	5	.8	22.0	.7	1.4	18.2	110.7	70.9	166.1	15.5	CC	(D)
	Nevada .....	-	90	39	5.4	171.5	4.4	9.3	134.1	1 002.1	551.8	1 222.0	331.9	2.8	236.1
	South Dakota .....	-	4	2	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Utah .....	-	14	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.1	37.7
	Washington .....	-	15	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
106	<b>Ferroalloy ores, except vanadium</b> ....	-	58	7	1.3	46.2	.8	1.5	24.2	61.1	56.3	109.9	7.5	4.7	145.8
	Colorado .....	-	13	4	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Idaho .....	-	4	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
108	<b>Metal mining services</b> .....	E1	268	42	2.8	80.8	2.2	4.6	59.8	175.6	101.3	251.3	25.7	2.5	89.5
	Arizona .....	E4	24	7	.3	8.7	.3	.5	6.8	15.9	(D)	24.6	(D)	.2	9.1
	California .....	-	20	1	.2	4.6	.1	.3	3.9	12.6	7.6	17.7	2.4	(NA)	(NA)
	Colorado .....	-	25	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	5.8
	Montana .....	-	13	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Nevada .....	-	33	10	.5	16.2	.5	1.0	13.8	45.4	24.0	62.2	7.2	.3	10.2
	South Dakota .....	-	8	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Utah .....	E4	14	5	.2	6.4	.2	.3	4.1	9.8	3.9	12.5	1.2	.1	4.8
	Washington .....	-	8	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
109	<b>Miscellaneous metal ores</b> .....	-	178	42	3.8	116.3	2.7	5.2	74.5	313.1	206.2	449.0	70.3	12.6	686.8
	Arizona .....	E2	18	5	.2	5.9	.2	.4	4.7	11.4	(D)	17.9	(D)	(NA)	(NA)
	Arkansas .....	-	5	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	California .....	-	13	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	24.4
	Colorado .....	E3	35	6	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.3	152.1
	Florida .....	-	2	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Montana .....	-	6	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Nevada .....	E3	8	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	11.4
	New Mexico .....	-	13	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.9	156.3
	Texas .....	-	15	4	.3	8.2	.2	.4	5.5	36.9	(D)	56.4	(D)	1.4	67.1
	Utah .....	-	13	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	15.0
	Wyoming .....	-	22	3	.5	15.7	.3	.6	9.9	4.8	(D)	20.9	(D)	EE	(D)
12	<b>Coal mining</b> .....	-	3 905	1 418	163.4	5 567.0	128.7	259.3	4 251.4	17 067.9	10 552.5	25 955.2	1 665.2	251.2	18 631.0
	Alabama .....	-	96	51	7.7	238.0	5.7	11.1	175.0	651.8	368.8	959.8	60.8	11.9	874.8
	Alaska .....	-	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Arizona .....	-	7	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	California .....	E9	12	1	BB	(D)	(Z)	(Z)	.2	.6	.3	.8	.1	CC	(D)
	Colorado .....	-	54	25	3.0	114.9	1.7	3.4	58.4	226.3	109.3	295.9	39.6	7.1	359.6
	Illinois .....	-	104	62	13.6	496.4	10.7	20.8	370.2	1 448.9	682.3	2 024.7	106.6	19.2	1 449.0
	Indiana .....	-	87	36	4.6	170.9	3.4	7.2	120.7	576.5	282.3	800.8	58.0	6.3	497.6
	Iowa .....	-	6	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.1	9.8
	Kansas .....	E6	10	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Kentucky .....	E1	1 027	352	33.4	1 076.1	28.2	57.7	885.6	3 258.0	2 394.3	5 343.9	308.4	47.9	3 570.2
	Maryland .....	E2	32	7	.6	20.7	.6	1.2	19.4	68.6	31.2	95.9	3.9	1.0	67.8
	Missouri .....	-	23	14	1.6	65.2	.9	1.8	32.0	118.3	53.9	161.6	10.6	2.2	118.9
	Montana .....	-	12	6	1.3	48.9	.7	1.4	27.3	445.8	71.6	510.1	7.4	1.2	349.1
	New Mexico .....	-	11	8	2.0	79.5	1.5	3.1	61.1	419.7	117.0	457.4	79.3	2.1	330.3
	North Dakota .....	-	16	9	1.2	46.8	.8	1.5	30.5	153.5	47.7	194.9	6.3	1.2	133.5
	Ohio .....	-	201	75	8.7	300.6	6.8	14.2	225.9	943.6	671.0	1 512.6	102.0	13.5	1 023.4
	Oklahoma .....	E1	32	13	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.5	112.0
	Oregon .....	-	2	1	AA	(D)	-	-	-	-	-	-	-	BB	-
	Pennsylvania .....	E1	646	180	22.5	715.0	18.2	36.3	558.5	1 776.5	1 459.0	3 069.3	166.1	35.8	2 134.0
	Tennessee .....	E3	114	30	2.4	61.6	1.7	3.4	43.3	145.7	(D)	215.0	(D)	3.9	217.1

See footnotes at end of table.



**Table 2. Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Geographic area and industry group	1987											1982		
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)	
		E <sup>1</sup>	Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
12	Coal mining—Con.														
	Texas .....	-	28	12	4.2	171.9	3.0	6.2	116.0	377.7	245.8	601.4	22.0	4.2	230.9
	Utah .....	-	19	14	2.7	92.8	2.2	4.4	72.4	325.7	(D)	406.7	(D)	5.3	370.9
	Virginia .....	E1	511	182	14.5	444.9	11.7	22.9	347.1	1 225.2	1 143.1	2 219.8	148.5	20.7	1 284.7
	Washington .....	-	7	2	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	West Virginia .....	E1	759	297	30.6	1 075.2	25.0	50.7	886.9	3 232.2	2 237.7	5 074.5	395.3	55.6	3 945.8
	Wyoming .....	-	48	30	4.8	196.6	3.5	7.1	136.6	1 258.7	255.1	1 441.0	72.9	6.1	1 285.3
122	Bituminous coal and lignite mining .....	-	3 507	1 335	157.5	5 410.2	123.8	249.5	4 125.3	16 678.9	10 282.1	25 346.9	1 614.1	240.9	18 041.2
	Alabama .....	-	95	50	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Alaska .....	-	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Arizona .....	-	6	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	California .....	E8	11	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	-
	Colorado .....	-	50	25	3.0	114.7	1.7	3.4	58.3	225.9	109.1	295.4	39.6	7.0	357.2
	Illinois .....	-	99	62	13.6	496.4	10.7	20.8	370.1	1 448.7	682.2	2 024.4	106.5	FF	(D)
	Indiana .....	-	81	36	4.5	169.5	3.4	7.1	119.5	572.4	281.0	795.6	57.9	FF	(D)
	Iowa .....	-	6	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.1	9.8
	Kansas .....	E6	9	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	27.1
	Kentucky .....	E1	974	344	32.8	1 057.7	27.6	56.4	870.1	3 206.4	2 356.5	5 263.0	299.9	46.8	3 497.0
	Maryland .....	E2	28	6	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	67.6
	Missouri .....	-	21	14	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Montana .....	-	11	6	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	New Mexico .....	-	9	8	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.1	330.0
	North Dakota .....	-	16	9	1.2	46.8	.8	1.5	30.5	153.5	47.7	194.9	6.3	EE	(D)
	Ohio .....	-	173	68	8.3	286.2	6.4	13.3	213.8	913.6	655.7	1 471.6	97.7	13.0	986.9
	Oklahoma .....	-	26	12	.9	24.9	.6	1.4	15.7	50.2	47.2	92.7	4.7	1.2	98.2
	Oregon .....	-	2	1	AA	(D)	-	-	-	-	-	-	-	BB	-
	Pennsylvania .....	E1	481	142	19.7	654.9	15.9	32.2	511.7	1 628.4	1 332.1	2 808.5	151.9	31.7	1 927.1
	Tennessee .....	E3	108	29	2.3	59.4	1.7	3.3	42.3	141.7	80.2	209.7	12.2	3.9	213.6
	Texas .....	-	24	11	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Utah .....	-	17	14	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	5.3	370.2
	Virginia .....	E1	480	176	14.2	436.5	11.4	22.4	340.3	1 205.0	1 134.9	2 192.3	147.6	19.8	1 234.8
	Washington .....	-	6	2	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	West Virginia .....	E1	697	280	29.6	1 042.9	24.1	48.9	858.7	3 172.4	2 184.1	4 974.9	381.6	54.3	3 874.9
	Wyoming .....	-	42	28	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
123	Anthracite mining .....	E1	107	26	1.9	41.2	1.6	2.9	32.4	109.4	109.0	206.3	12.1	3.4	171.7
	Pennsylvania .....	E1	107	26	1.9	41.2	1.6	2.9	32.4	109.4	109.0	206.3	12.1	3.4	171.7
124	Coal mining services .....	E1	291	57	4.0	115.7	3.3	6.8	93.7	279.6	161.4	402.0	39.0	6.9	418.1
	Kentucky .....	E1	53	8	.7	18.4	.6	1.3	15.5	51.6	37.8	80.9	8.5	1.1	73.2
	Ohio .....	-	28	7	.5	14.5	.4	.9	12.1	29.9	15.4	41.0	4.4	.5	36.5
	Pennsylvania .....	E3	58	12	.8	18.8	.6	1.2	14.4	38.6	17.9	54.5	2.0	.7	35.3
	Texas .....	-	4	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Virginia .....	E3	31	6	.3	8.5	.3	.5	6.8	20.2	8.2	27.4	1.0	.9	50.0
	West Virginia .....	E1	62	17	1.0	32.3	.8	1.8	28.1	59.7	53.6	99.6	13.8	1.3	70.9
13	Oil and gas extraction .....	E1	22 910	3 167	377.9	11 960.5	206.2	437.3	5 283.3	80 048.8	44 031.7	112 363.0	11 717.4	684.5	159 936.6
	Alabama .....	E1	157	23	1.4	39.9	1.1	2.5	29.3	467.4	288.2	660.4	95.2	2.2	1 035.7
	Alaska .....	-	124	41	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	12.3	14 054.9
	Arizona .....	E7	55	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	44.6
	Arkansas .....	-	318	23	2.4	59.0	1.6	3.3	35.1	409.9	784.9	1 067.1	127.6	4.0	957.3
	California .....	-	936	217	32.5	1 028.5	16.8	34.5	457.5	5 215.7	2 571.1	6 994.5	792.3	40.2	11 067.4
	Colorado .....	E3	1 015	133	14.8	557.7	5.4	11.6	157.4	1 368.8	862.9	1 951.7	280.0	29.8	2 312.9
	Connecticut .....	E9	11	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Delaware and District of Columbia .....	-	10	1	.2	7.5	-	-	-	-	-	-	-	.2	.4
	Florida .....	E2	144	9	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Georgia .....	E8	45	1	.2	6.5	.1	.2	2.5	22.4	(D)	27.6	(D)	AA	(D)
	Illinois .....	E3	626	42	4.5	101.5	3.0	5.8	57.3	387.3	198.0	522.6	62.7	7.2	898.2
	Indiana .....	E5	194	5	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.6	185.0
	Iowa .....	E7	11	1	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Kansas .....	E1	1 185	122	11.1	267.2	7.0	14.1	145.6	1 574.3	2 040.1	3 433.9	180.5	18.2	3 117.5
	Kentucky .....	E1	319	29	4.0	103.2	1.5	3.0	28.9	299.4	152.0	417.1	34.3	4.0	475.1
	Louisiana .....	-	1 871	402	48.4	1 538.7	30.6	65.6	834.8	16 408.3	10 908.5	24 310.9	3 006.0	99.1	32 919.8
	Maryland .....	E4	19	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	8.4
	Michigan .....	E1	336	50	4.1	118.3	3.0	6.4	74.2	981.4	796.9	1 635.7	142.6	5.3	1 669.1
	Minnesota .....	E7	28	1	.2	8.3	.1	.1	1.1	7.7	3.0	9.6	1.0	BB	(D)
	Mississippi .....	E1	462	54	4.3	107.4	3.3	7.0	75.5	879.0	311.0	1 048.1	141.8	8.6	1 734.8
	Missouri .....	E9	52	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	23.1
	Montana .....	E1	307	33	2.0	52.4	1.4	2.8	31.2	480.3	152.6	568.5	64.4	5.2	1 207.5
	Nebraska .....	E3	140	10	.9	22.7	.5	1.1	11.7	79.6	43.3	110.1	12.8	1.5	211.0
	Nevada .....	E2	69	5	.5	13.0	.3	.8	8.8	54.7	25.4	74.9	5.3	1.5	106.9
	New Jersey .....	E6	37	4	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	10.7
	New Mexico .....	-	640	120	9.3	255.8	6.2	13.1	155.6	2 732.8	1 469.7	3 877.6	324.9	16.4	6 442.3
	New York .....	E6	197	22	4.2	204.1	.7	1.6	15.7	153.5	55.2	185.9	22.7	2.4	198.2
	North Dakota .....	-	284	31	2.5	64.5	2.0	4.2	50.6	799.0	280.8	988.8	91.0	7.0	1 852.7
	Ohio .....	E3	712	60	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	10.5	1 118.9
	Oklahoma .....	E1	2 842	325	43.6	1 330.4	19.9	41.3	462.2	5 384.5	3 617.1	8 172.8	828.8	100.8	13 075.0
	Oregon .....	E4	35	2	.2	3.1	.2	.3	2.6	14.0	5.6	16.9	2.8	BB	(D)
	Pennsylvania .....	E3	420	49	4.6	115.4	3.0	6.7	66.2	422.8	187.3	538.9	71.2	7.2	592.0
	Tennessee .....	E5	66	3	.3	6.5	.2	.4	3.3	59.5	13.5	56.1	16.9	1.0	126.2
	Texas .....	E1	7 643	1 148	146.8	4 801.3	75.3	160.4	1 883.8	28 671.9	13 955.6	38 869.9	3 757.6	253.6	53 608.7
	Utah .....	E1	256	27	2.1	56.9	1.3	2.9	35.9	844.5	279.9	1 019.6	104.9	5.8	1 040.6
	Virginia .....	E4	58	3	.5	12.7	.2	.4	4.3	40.0	15.3	43.6	11.8	BB	(D)
	Washington .....	E6	45	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	38.2

See footnotes at end of table.

Table 2. **Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Geographic area and industry group	1987											1982		
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, pur- chased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)	
		Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)							
13	Oil and gas extraction—Con.														
	West Virginia.....	E1	453	36	3.7	80.2	2.8	6.0	56.3	386.6	395.1	735.7	46.1	6.4	806.2
	Wyoming.....	-	656	91	8.2	235.5	6.0	13.0	164.6	2 646.7	1 572.0	3 761.8	457.0	20.4	4 913.2
	Atlantic.....	-	7	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Northern Gulf of Mexico.....	-	32	25	3.4	115.5	2.9	6.3	93.1	252.3	(D)	1 449.0	(D)	3.2	2 218.2
131	Crude petroleum and natural gas.....	E1	10 203	1 171	198.8	7 510.0	69.4	142.3	2 153.8	67 954.9	19 112.2	76 518.1	10 549.0	264.2	126 035.2
	Alabama.....	E1	46	6	.4	11.0	.2	.5	6.4	403.2	155.3	470.4	88.1	.4	858.3
	Alaska.....	-	33	15	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Arizona.....	E8	26	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.1	20.9
	Arkansas.....	E1	156	11	1.2	32.0	.6	1.1	13.8	349.0	140.8	369.5	120.4	1.2	784.7
	California.....	-	381	72	19.1	673.6	6.5	13.3	198.5	4 432.0	1 930.8	5 681.7	681.0	19.9	9 682.7
	Colorado.....	E3	515	86	10.8	452.7	2.5	5.1	86.5	1 143.3	488.0	1 378.9	252.3	16.2	1 385.0
	Connecticut.....	-	9	2	AA	(D)	-	-	-	-	-	-	-	AA	-
	Delaware and District of Columbia.....	-	9	1	AA	(D)	-	-	-	-	-	-	-	.2	-
	Florida.....	E2	52	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Illinois.....	E4	333	24	2.8	70.7	1.6	3.0	33.3	317.6	163.3	424.1	56.8	3.5	679.2
	Indiana.....	E5	106	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	131.9
	Iowa.....	E8	4	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Kansas.....	E2	589	56	6.1	162.7	2.9	5.5	64.4	1 251.9	340.6	1 440.3	152.2	7.7	2 115.8
	Kentucky.....	E1	189	20	3.2	88.1	.8	1.6	17.2	251.0	55.1	274.6	31.5	2.4	297.3
	Louisiana.....	-	604	115	23.4	909.2	11.0	22.8	376.1	14 395.1	3 794.3	15 343.4	2 846.0	31.8	26 573.5
	Maryland.....	E9	7	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Michigan.....	E1	140	18	1.4	48.1	.7	1.4	20.2	787.6	272.5	930.3	129.9	2.0	1 309.8
	Minnesota.....	E9	11	1	.2	7.1	(Z)	(Z)	.2	4.7	1.5	5.5	.8	AA	(D)
	Mississippi.....	E1	170	12	1.2	36.2	.7	1.5	21.0	707.4	204.9	783.5	128.8	2.0	1 309.0
	Montana.....	E1	127	10	.9	28.5	.5	.9	12.4	427.0	113.3	480.6	59.7	1.4	1 000.4
	Nebraska.....	E2	65	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	151.7
	New Jersey.....	-	13	1	CC	(D)	-	-	-	-	-	-	-	CC	-
	New Mexico.....	-	250	29	3.7	123.3	1.6	3.2	52.5	2 270.4	475.5	2 490.2	255.8	4.4	5 130.5
	New York.....	E6	107	16	3.6	189.6	.3	.7	6.8	128.0	42.0	149.4	20.7	1.0	106.3
	North Dakota.....	-	100	6	.6	18.7	.4	.9	13.4	655.6	139.2	719.7	75.1	1.3	1 386.2
	Ohio.....	E3	337	29	2.4	57.1	1.4	3.0	29.6	430.7	137.0	492.8	75.0	4.2	727.7
	Oklahoma.....	E1	1 320	118	24.2	852.9	6.2	12.1	167.3	4 153.2	1 352.9	4 796.3	709.7	39.3	8 407.7
	Pennsylvania.....	E2	199	27	2.3	65.3	1.2	2.6	28.3	313.3	122.0	372.6	62.7	3.5	347.7
	Tennessee.....	E6	31	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	91.5
	Texas.....	E1	3 547	418	76.7	3 058.3	23.0	47.8	713.1	23 981.2	5 738.0	26 373.6	3 345.6	103.2	42 039.3
	Utah.....	E1	91	16	1.0	29.4	.4	.9	13.4	771.8	136.5	809.2	99.1	1.7	691.5
	Virginia.....	E4	25	-	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	33.8
	West Virginia.....	E2	306	15	2.1	43.9	1.4	2.9	27.3	284.2	79.2	323.5	40.0	2.7	472.0
	Wyoming.....	-	180	25	3.0	109.4	1.8	3.9	67.4	2 317.7	747.1	2 662.8	402.0	5.0	3 759.9
	Northern Gulf of Mexico.....	-	5	2	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.1	1 988.2
132	Natural gas liquids ..	-	714	210	12.7	433.0	9.7	20.2	320.0	4 024.9	21 107.4	24 749.5	382.7	14.2	8 864.8
	Alabama.....	-	5	4	.2	5.4	.2	.3	5.0	17.6	101.4	118.0	.9	.1	74.2
	California.....	-	36	15	.8	27.4	.5	1.1	17.3	72.0	371.9	399.0	44.9	.7	256.2
	Colorado.....	E1	24	4	.3	9.7	.2	.4	5.7	43.9	291.9	322.5	13.3	.1	108.6
	Kansas.....	-	19	8	.5	15.5	.4	.8	12.1	127.8	1 614.4	1 732.5	9.8	.4	448.0
	Louisiana.....	-	74	22	1.2	39.8	.9	2.0	32.6	744.1	6 499.0	7 213.6	29.5	1.6	1 873.7
	Michigan.....	-	10	2	.2	5.8	.1	.2	3.9	56.1	461.0	515.5	1.6	.2	114.7
	Mississippi.....	-	5	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	New Mexico.....	-	28	19	.9	28.3	.8	1.6	24.5	240.6	904.8	1 094.8	50.7	1.1	718.5
	North Dakota.....	-	9	4	.2	8.2	.2	.5	8.0	67.1	105.4	164.1	8.4	.2	133.7
	Oklahoma.....	-	102	24	1.3	45.4	1.1	2.4	39.1	522.4	1 884.8	2 362.1	45.1	1.4	1 017.2
	Texas.....	-	331	91	5.8	204.6	4.4	9.1	143.9	1 694.8	6 807.0	8 365.5	136.3	6.9	3 453.6
	Utah.....	-	9	2	.1	3.9	.1	.2	3.6	20.9	118.3	138.4	.9	.1	103.0
	Virginia.....	-	1	1	AA	(D)	-	-	-	-	-	-	-	(NA)	(NA)
	Wyoming.....	-	34	6	.5	15.1	.5	.9	13.9	118.3	722.6	802.5	38.4	.4	230.6
138	Oil and gas field services.....	E2	11 993	1 786	166.5	4 017.5	127.1	274.8	2 809.5	8 068.9	3 812.1	11 095.4	785.7	406.1	25 036.6
	Alabama.....	-	106	13	.9	23.6	.7	1.6	17.9	46.7	31.5	72.0	6.2	1.6	103.2
	Alaska.....	-	89	26	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	8.2	845.8
	Arizona.....	E4	29	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	23.7
	Arkansas.....	E2	159	12	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	California.....	E1	519	130	12.6	327.6	9.8	20.2	241.6	711.7	268.5	913.8	66.4	19.6	1 128.5
	Colorado.....	E3	476	43	3.7	95.4	2.7	6.1	65.2	181.7	83.0	250.3	14.5	13.5	819.4
	Connecticut.....	E9	2	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Florida.....	E4	90	4	.5	10.6	.4	1.0	8.3	29.0	14.5	40.6	3.0	.8	46.4
	Georgia.....	E5	28	-	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Illinois.....	E3	291	18	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.8	219.0
	Indiana.....	E4	88	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	53.1
	Kansas.....	E2	577	58	4.5	88.9	3.7	7.8	69.1	194.6	85.1	261.1	18.5	10.1	553.7
	Kentucky.....	E3	128	7	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Louisiana.....	E1	1 193	265	23.9	589.7	18.7	40.8	426.1	1 269.1	615.3	1 753.8	130.5	65.6	4 472.6
	Maryland.....	E3	12	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Michigan.....	E2	186	30	2.6	64.4	2.1	4.7	50.0	137.7	63.3	189.9	11.1	3.2	244.6
	Mississippi.....	E2	287	41	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	6.6	415.8
	Montana.....	E2	176	22	1.1	22.7	.9	1.9	17.9	46.8	(D)	64.4	(D)	FF	(D)
	Nebraska.....	E3	72	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	Nevada.....	E1	45	5	.4	10.5	.3	.7	7.3	23.0	10.1	31.4	1.6	1.4	85.0

See footnotes at end of table.



**Table 2. Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Geographic area and industry group	1987											1982		
		E <sup>1</sup>	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)
			Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
13	Oil and gas extraction—Con.														
138	Oil and gas field services—Con.														
	New Jersey .....	E6	24	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	10.7
	New Mexico .....	E1	362	72	4.7	104.2	3.8	8.3	78.6	221.8	89.3	292.7	18.4	10.9	593.2
	New York .....	E4	90	6	.6	14.5	.4	1.0	8.8	25.4	13.1	36.5	2.1	EE	(D)
	North Dakota .....	E1	175	21	1.6	37.6	1.4	2.8	29.2	76.2	36.3	104.9	7.5	5.5	332.8
	Ohio .....	E2	375	31	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Oklahoma .....	E2	1 420	183	18.2	432.1	12.5	26.8	255.8	708.9	379.4	1 014.4	73.9	60.1	3 650.2
	Oregon .....	E4	23	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Pennsylvania .....	E4	219	22	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Tennessee .....	E3	35	—	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	34.6
	Texas .....	E2	3 765	639	64.2	1 538.4	48.0	103.5	1 026.8	2 995.8	1 410.6	4 130.7	275.7	143.4	8 115.8
	Utah .....	E2	156	9	1.0	23.6	.8	1.8	18.8	51.7	25.2	71.9	4.9	3.9	246.2
	Virginia .....	E3	32	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Washington .....	E5	38	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	36.7
	West Virginia .....	E1	141	20	1.5	33.9	1.3	2.9	27.0	77.2	44.9	116.1	5.9	FF	(D)
	Wyoming .....	E2	442	60	4.7	111.0	3.7	8.2	83.3	210.8	102.4	296.5	16.7	15.0	922.7
	Atlantic .....	—	5	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Northern Gulf of Mexico .....	—	27	23	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.1	230.0
14	Nonmetallic minerals, except fuels	E1	5 775	1 454	112.7	2 858.0	82.5	177.9	1 956.4	9 232.9	4 698.0	12 794.5	1 136.4	109.8	6 273.0
	Alabama .....	—	93	25	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.8	66.7
	Arizona .....	E2	88	13	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	Arkansas .....	E1	83	18	1.4	26.1	1.0	2.1	18.4	94.9	50.2	132.1	12.9	.8	33.6
	California .....	E1	340	110	9.1	272.5	6.9	14.4	198.2	1 012.1	463.2	1 385.0	90.3	8.6	683.0
	Colorado .....	E2	117	16	1.2	29.4	.9	1.8	20.4	75.0	41.8	107.3	9.5	1.7	99.3
	Connecticut .....	E1	72	19	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	37.8
	Delaware and District of Columbia .....	—	12	3	.2	4.9	.2	.3	4.1	11.4	6.8	17.4	.8	(NA)	(NA)
	Florida .....	—	190	67	8.3	193.9	6.6	13.2	140.2	713.8	493.7	1 074.6	132.9	FF	(D)
	Georgia .....	—	164	82	7.8	204.0	6.3	14.1	148.9	802.5	473.9	1 158.1	118.2	7.3	421.3
	Hawaii .....	E4	9	4	.2	7.4	.2	.4	5.7	23.5	10.4	31.1	2.8	AA	(D)
	Idaho .....	—	46	11	.9	23.4	.7	1.4	16.9	83.9	60.2	120.5	23.6	.9	70.6
	Illinois .....	E1	243	58	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	4.7	196.0
	Indiana .....	E1	187	36	2.3	55.3	1.7	3.7	38.4	168.8	82.2	226.3	24.6	2.3	102.0
	Iowa .....	E2	183	28	2.0	46.1	1.5	3.2	30.5	124.0	66.8	177.3	13.5	1.9	85.1
	Kansas .....	E2	113	22	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.3	49.9
	Kentucky .....	E2	112	33	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.2	95.6
	Louisiana .....	—	84	21	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Maine .....	E6	29	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Maryland .....	E1	76	33	2.1	49.9	1.7	3.7	39.6	196.2	104.1	262.8	37.5	1.4	91.1
	Massachusetts .....	E2	100	18	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	46.8
	Michigan .....	E1	188	29	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Minnesota .....	E2	112	20	1.3	36.0	1.0	2.1	25.0	97.8	44.1	133.1	8.8	1.2	57.2
	Mississippi .....	E2	63	17	1.0	17.3	.7	1.5	11.7	51.8	34.9	80.0	6.7	CC	(D)
	Missouri .....	E1	238	42	2.9	62.9	2.3	4.8	48.5	195.0	100.0	275.6	19.4	2.8	106.8
	Montana .....	E1	35	10	.7	17.0	.5	1.0	11.6	44.7	23.9	61.6	7.0	.6	34.2
	Nebraska .....	E2	85	7	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	Nevada .....	E1	53	16	1.0	26.4	.8	1.5	19.0	72.1	35.7	100.6	7.2	1.5	85.8
	New Hampshire .....	E2	47	9	.5	11.5	.3	.8	8.6	40.4	(D)	49.3	(D)	.2	10.1
	New Jersey .....	E1	111	39	3.2	105.3	1.7	3.5	41.6	220.8	107.0	299.0	28.9	2.2	102.2
	New Mexico .....	—	58	14	1.8	46.9	1.4	3.0	37.5	135.0	68.7	194.0	9.7	2.9	130.4
	New York .....	E1	247	48	3.9	105.8	3.1	6.8	78.3	315.5	152.5	429.2	38.8	3.4	192.5
	North Carolina .....	—	161	75	3.9	93.3	2.8	6.3	61.6	405.3	147.8	515.0	38.1	3.7	181.4
	North Dakota .....	E3	26	4	.3	8.1	.2	.5	5.6	25.7	12.8	35.9	2.5	BB	(D)
	Ohio .....	E1	316	60	4.5	112.3	3.4	7.6	78.1	310.3	158.8	429.1	40.0	4.1	176.7
	Oklahoma .....	E1	101	20	1.4	29.6	1.1	2.4	21.4	84.4	41.2	117.7	8.0	1.6	81.2
	Oregon .....	E4	112	11	1.0	21.9	.7	1.5	16.2	55.1	34.6	83.8	5.9	.9	40.6
	Pennsylvania .....	E1	302	84	6.2	142.0	3.4	7.5	77.1	354.4	166.4	478.9	42.0	4.6	200.4
	Rhode Island .....	E1	16	4	.2	5.3	.2	.3	4.4	15.6	6.7	20.4	2.0	AA	(D)
	South Carolina .....	—	70	28	1.5	32.2	1.2	2.6	24.9	128.4	65.8	170.7	23.5	1.5	70.5
	South Dakota .....	—	38	5	.4	9.0	.3	.6	6.3	29.8	12.5	40.8	1.5	CC	(D)
	Tennessee .....	E1	150	51	2.9	67.3	2.0	4.6	41.3	203.1	117.4	294.0	26.5	2.6	118.3
	Texas .....	E1	317	87	6.6	153.5	4.9	10.9	105.6	581.3	232.8	775.8	38.2	7.1	525.5
	Utah .....	—	48	11	.8	23.0	.6	1.4	15.6	58.3	32.3	79.3	11.3	EE	(D)
	Vermont .....	E1	45	9	.7	18.1	.5	.9	9.3	57.8	39.4	89.5	7.7	.7	34.3
	Virginia .....	E1	145	66	3.7	87.2	2.8	6.4	59.9	285.9	151.3	395.6	41.6	3.1	132.1
	Washington .....	E1	105	11	1.0	27.6	.8	1.7	21.3	90.6	44.7	124.4	10.9	.9	44.7
	West Virginia .....	E1	43	16	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	31.0
	Wisconsin .....	E1	153	25	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.7	76.6
	Wyoming .....	—	39	18	3.6	131.9	2.8	6.0	102.2	451.3	215.1	622.2	44.2	4.9	469.6
141	Dimension stone	—	149	19	1.3	24.5	1.1	2.0	17.7	64.7	25.2	85.8	4.0	1.5	50.2
	Georgia .....	—	19	3	.3	3.4	.2	.4	3.2	7.2	3.5	10.0	.7	.2	3.6
	Pennsylvania .....	E1	16	3	.2	2.9	.1	.2	2.3	9.0	4.2	12.6	.6	(NA)	(NA)
	Vermont .....	—	8	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Wisconsin .....	—	12	3	.1	2.7	.1	.2	2.0	8.7	(D)	13.1	(D)	(NA)	(NA)

See footnotes at end of table.

Table 2. **Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Geographic area and industry group	1987											1982		
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)	
		E <sup>1</sup>	Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
14	Nonmetallic minerals, except fuels—Con.														
142	Crushed and broken stone, including riprap -----	E1	2 002	711	43.7	1 081.8	32.8	72.4	753.8	3 465.3	1 823.3	4 768.0	520.6	36.8	1 787.2
	Alabama -----	-	38	14	1.2	30.0	.7	1.7	14.1	71.3	44.7	105.9	10.1	1.1	42.5
	Arizona -----	E1	12	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Arkansas -----	E2	17	6	.4	8.0	.3	.7	5.9	19.5	13.3	27.5	5.4	.4	19.0
	California -----	E3	78	26	1.8	52.9	1.4	2.9	39.0	145.5	79.8	208.9	16.4	EE	(D)
	Colorado -----	E1	29	4	.3	7.9	.2	.5	5.9	14.8	10.8	22.9	2.8	.5	13.9
	Connecticut -----	-	18	8	.5	17.4	.2	.5	7.7	53.9	11.6	62.3	3.1	.3	13.1
	Florida -----	-	66	33	2.4	53.5	1.9	3.8	40.2	192.4	142.3	267.0	67.7	1.7	94.7
	Georgia -----	-	70	47	2.5	61.4	1.9	4.5	42.9	262.5	134.2	363.3	33.4	1.8	103.2
	Hawaii -----	E4	7	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Illinois -----	-	110	28	2.2	62.9	1.6	3.4	45.4	174.9	87.7	239.3	23.2	1.8	112.0
	Indiana -----	-	67	19	1.1	27.5	.8	1.9	19.4	83.8	45.2	114.4	14.6	1.1	51.6
	Iowa -----	E2	115	25	1.6	37.4	1.2	2.5	24.2	104.6	56.1	149.7	11.0	1.4	69.7
	Kansas -----	E1	53	14	.7	13.8	.6	1.3	11.6	41.9	22.2	58.6	5.5	.7	27.7
	Kentucky -----	E2	79	29	1.7	35.7	1.4	3.0	26.5	118.3	61.8	164.4	15.7	1.9	78.2
	Maryland -----	-	25	16	1.0	26.7	.9	2.0	21.8	119.9	65.7	157.6	28.0	.6	52.0
	Massachusetts -----	-	24	9	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	15.3
	Michigan -----	-	23	8	.9	24.5	.8	1.5	19.4	66.1	27.2	89.4	3.9	EE	(D)
	Minnesota -----	E2	24	7	.4	10.5	.3	.6	6.9	26.6	13.2	37.6	2.2	.3	15.7
	Missouri -----	E2	155	33	2.2	48.6	1.7	3.6	37.1	148.5	73.8	207.2	15.1	1.9	67.5
	Nebraska -----	E1	15	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	New Hampshire -----	E1	9	5	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	New Jersey -----	E1	25	16	1.2	33.6	.8	1.7	21.0	122.6	56.3	162.7	16.1	.6	42.9
	New Mexico -----	-	7	2	.1	3.8	.1	.3	3.1	13.8	8.2	19.6	2.4	(NA)	(NA)
	New York -----	-	71	25	1.6	45.4	1.3	3.1	35.8	136.2	75.0	188.5	22.6	EE	(D)
	North Carolina -----	-	81	53	2.1	54.1	1.5	3.5	34.1	209.0	82.9	265.1	26.8	1.8	88.0
	Ohio -----	-	84	25	1.7	42.1	1.2	2.7	27.6	108.4	70.8	164.9	14.4	1.6	64.5
	Oklahoma -----	E1	49	17	1.0	22.1	.8	1.7	15.8	59.7	31.3	84.5	6.5	1.2	57.4
	Oregon -----	E5	55	3	.4	9.7	.3	.7	7.5	24.4	14.6	36.3	2.7	.4	20.2
	Pennsylvania -----	-	150	59	3.4	87.0	2.3	5.2	54.6	257.3	123.7	347.5	33.5	2.9	131.0
	South Carolina -----	-	23	13	.6	12.4	.5	1.1	10.1	68.6	33.5	84.9	17.2	.5	27.5
	Tennessee -----	E1	88	34	1.9	45.5	1.3	3.0	26.7	140.4	72.8	193.5	19.8	1.3	63.0
	Texas -----	E1	71	35	2.2	48.2	1.7	3.9	34.8	130.3	69.4	184.9	14.8	1.9	102.0
	Vermont -----	-	8	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Virginia -----	-	92	50	2.6	59.9	2.0	4.6	42.1	211.1	115.6	294.6	32.0	2.1	88.0
	Washington -----	E1	34	4	.4	10.3	.3	.7	7.9	32.3	17.1	43.5	5.8	.3	12.6
	West Virginia -----	E1	25	10	.7	13.4	.5	1.0	8.7	37.6	18.9	49.1	7.5	.6	18.8
	Wisconsin -----	-	58	13	.9	23.7	.7	1.5	17.2	92.6	44.1	121.8	15.0	.8	44.3
144	Sand and gravel -----	E2	2 750	436	32.8	772.0	23.9	51.1	550.8	2 319.9	1 056.7	3 139.0	237.6	27.8	1 335.6
	Alabama -----	E2	37	5	.4	7.4	.3	.8	5.3	25.3	13.9	35.1	4.1	.4	12.9
	Arizona -----	E2	52	9	.6	11.6	.5	1.0	8.8	34.2	17.2	48.6	2.7	BB	(D)
	Arkansas -----	E3	47	7	.4	7.2	.3	.7	5.4	18.3	13.7	28.1	3.9	.3	10.2
	California -----	E2	190	65	3.6	107.9	2.7	5.7	81.0	364.5	132.3	468.6	28.2	2.5	158.1
	Colorado -----	E3	59	9	.6	16.5	.5	1.0	11.7	48.6	23.9	67.2	5.3	.6	32.4
	Connecticut -----	E3	43	8	.5	17.0	.3	.6	8.2	37.6	15.8	50.3	3.1	.3	21.7
	Delaware and District of Columbia -----	-	8	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Florida -----	E2	68	14	1.3	25.7	1.1	2.5	21.2	97.0	38.3	127.4	7.9	EE	(D)
	Georgia -----	E2	35	5	.3	6.7	.3	.6	5.1	22.0	12.6	30.7	3.9	.4	12.2
	Idaho -----	E3	21	-	.1	2.0	.1	.2	1.4	3.7	3.1	6.5	.3	.1	3.5
	Illinois -----	E2	115	23	1.6	46.2	1.2	2.5	32.2	148.7	(D)	199.8	(D)	1.3	69.2
	Indiana -----	E2	110	13	1.0	24.2	.7	1.7	17.2	77.7	34.4	102.8	9.3	.9	40.1
	Iowa -----	E3	56	2	.3	6.9	.3	.6	5.3	16.4	8.7	23.0	2.1	.4	14.3
	Kansas -----	E2	46	7	.5	13.0	.4	.8	9.2	33.3	13.1	43.2	3.2	.4	15.6
	Kentucky -----	E1	24	1	.2	4.3	.1	.3	2.7	12.1	5.0	16.0	1.1	AA	(D)
	Louisiana -----	E2	62	8	.7	11.6	.5	1.0	8.5	30.4	17.5	45.4	2.6	1.0	41.4
	Maryland -----	E1	41	15	.9	20.9	.7	1.5	16.1	69.4	34.8	95.1	9.2	.7	37.2
	Massachusetts -----	E3	65	7	.7	18.9	.5	1.0	13.5	67.3	32.7	88.7	11.2	.6	31.0
	Michigan -----	E2	151	16	1.3	33.7	1.0	2.2	24.9	103.6	49.4	144.4	8.6	1.1	42.4
	Minnesota -----	E2	73	11	.8	21.6	.6	1.4	17.0	68.1	27.9	90.4	5.6	.7	37.8
	Mississippi -----	E4	45	9	.6	9.7	.4	.8	6.6	24.8	14.5	35.8	3.5	.7	19.4
	Missouri -----	E2	47	5	.4	9.1	.3	.7	7.1	27.8	12.2	37.1	2.9	.4	17.5
	Montana -----	E2	14	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Nebraska -----	E2	68	4	.4	7.8	.3	.6	5.3	20.2	9.8	27.7	2.3	.5	15.3
	Nevada -----	E1	15	5	.4	6.8	.3	.5	5.7	22.7	9.3	29.3	2.7	.2	13.9
	New Hampshire -----	E3	35	3	.2	5.8	.2	.4	4.2	21.0	5.2	25.1	1.1	.2	7.7
	New Jersey -----	E2	72	18	1.0	27.3	.8	1.6	18.2	88.6	45.1	122.0	11.7	1.0	54.6
	New Mexico -----	E2	26	2	.2	3.5	.2	.3	2.4	9.5	5.3	13.6	1.2	.1	3.1
	New York -----	E2	148	15	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	43.1
	North Carolina -----	E2	49	8	.5	10.5	.4	1.0	8.4	34.4	14.8	46.8	2.4	CC	(D)
	North Dakota -----	E3	20	4	.3	7.6	.2	.4	5.3	23.8	(D)	33.4	(D)	AA	(D)
	Ohio -----	E1	195	30	2.2	52.5	1.6	3.8	37.7	163.9	70.5	215.2	19.1	1.8	80.9
	Oklahoma -----	E1	37	2	.3	5.9	.2	.5	4.4	20.2	(D)	27.0	(D)	.4	19.5
	Oregon -----	E3	41	6	.4	9.0	.3	.6	6.3	20.5	13.0	31.2	2.4	.4	17.1
	Pennsylvania -----	E4	99	14	2.0	34.4	.8	1.6	16.8	69.4	29.4	92.4	6.3	1.0	57.5
	South Carolina -----	E1	29	7	.4	7.9	.3	.6	4.9	22.2	12.3	32.4	2.1	.5	14.8
	South Dakota -----	E1	22	1	.1	3.3	.1	.2	2.2	10.3	3.3	13.2	.4	(NA)	(NA)
	Tennessee -----	E2	41	7	.5	9.9	.3	.7	5.8	30.8	13.1	41.5	2.4	.5	19.1
	Texas -----	E3	181	30	2.4	50.4	1.9	4.2	38.5	148.5	71.4	204.3	15.6	2.7	159.2
	Utah -----	E1	15	3	.1	2.8	.1	.2	1.8	6.0	3.1	8.5	.6	(NA)	(NA)
	Virginia -----	E5	37	9	.7	15.9	.5	1.2	12.4	48.5	23.9	67.5	4.9	.5	31.1
	Washington -----	E2	55	6	.5	13.0	.4	.8	10.3	44.0	19.3	59.6	3.6	.4	22.4
	West Virginia -----	-	15	5	.4	9.8	.2	.4	4.6	13.5	(D)	18.9	(D)	BB	(D)

See footnotes at end of table.



**Table 2. Statistics by Industry Group for Selected States and Offshore Areas: 1987 and 1982—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendices]

1987 SIC code	Geographic area and industry group	1987												1982	
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)	All em- ployees <sup>2</sup> (1,000)	Value added by mining (million dollars)	
		E <sup>1</sup>	Total (number)	With 20 employees or more (number)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
14	Nonmetallic minerals, except fuels—Con.														
144	Sand and gravel— Con.														
	Wisconsin .....	E2	78	9	.7	16.8	.5	1.0	11.3	45.0	22.9	61.0	6.9	.8	28.7
145	Clay, ceramic, and refractory minerals ..	-	197	100	9.9	272.2	7.1	15.3	165.2	827.2	532.7	1 248.6	111.3	10.5	509.8
	Alabama .....	-	14	5	.2	4.1	.2	.4	3.5	13.8	10.5	23.4	.8	.3	6.5
	Arkansas .....	-	7	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	California .....	-	11	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.1	1.8
	Florida .....	-	4	4	.3	7.3	.3	.6	5.9	20.0	(D)	33.8	(D)	BB	(D)
	Georgia .....	-	29	23	4.4	124.9	3.6	7.9	92.3	482.4	318.1	725.2	75.3	4.7	291.1
	Illinois .....	-	2	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Kentucky .....	-	4	3	.1	3.2	.1	.2	2.1	9.7	(D)	13.0	(D)	AA	(D)
	Mississippi .....	-	7	4	.3	4.3	.2	.5	3.1	17.9	13.1	28.6	2.3	.2	8.7
	Nevada .....	-	6	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	New Jersey .....	-	5	3	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	North Carolina .....	-	3	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	6.4
	Ohio .....	E1	9	2	.1	2.8	.1	.2	2.1	8.4	5.2	13.1	.5	.1	6.2
	Pennsylvania .....	E4	10	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	2.9
	South Carolina .....	-	6	6	.3	7.8	.3	.6	7.2	23.2	16.0	36.5	2.8	.3	17.8
	South Dakota .....	-	5	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Tennessee .....	-	5	5	.3	6.5	.2	.5	5.2	18.4	13.4	29.8	2.0	.4	13.3
	Texas .....	-	12	6	.4	10.5	.3	.7	7.1	38.5	20.7	55.3	4.0	BB	(D)
	Virginia .....	-	5	5	.3	5.3	.2	.5	3.8	17.5	8.2	22.9	2.7	.2	9.8
	Wyoming .....	-	12	9	.4	8.1	.3	.6	6.3	37.1	24.9	54.0	8.0	.6	46.2
147	Chemical and fertilizer mineral mining .....	-	148	79	16.3	500.8	11.6	24.4	335.9	1 998.9	964.6	2 772.0	191.5	25.6	2 237.2
	California .....	-	9	4	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	FF	(D)
	Florida .....	-	21	12	4.0	102.0	3.0	5.9	68.9	387.6	281.7	622.9	46.4	5.4	579.4
	Georgia .....	-	3	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Idaho .....	-	7	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	54.0
	Illinois .....	-	3	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
	Louisiana .....	-	13	8	1.1	31.8	.8	1.7	21.0	146.3	60.6	185.7	21.2	EE	(D)
	Montana .....	E6	4	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	New Mexico .....	-	10	5	1.2	35.3	1.0	2.1	28.9	99.6	49.0	143.3	5.3	2.6	117.1
	New York .....	-	3	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.8	54.1
	North Carolina .....	-	5	4	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	Ohio .....	-	3	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	24.1
	Pennsylvania .....	-	3	2	AA	(D)	-	-	-	-	-	-	-	AA	(D)
	Tennessee .....	-	5	4	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Texas .....	-	17	10	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.7	228.8
	Utah .....	-	7	5	.5	13.7	.4	.8	9.6	35.5	(D)	48.8	(D)	.7	68.3
	Wyoming .....	-	6	5	3.0	118.4	2.4	5.0	91.7	397.8	183.0	545.7	35.2	4.0	410.8
148	Nonmetallic minerals services, except fuels .....	-	177	23	1.8	44.9	1.3	2.8	31.9	119.0	71.8	165.4	25.4	1.6	70.4
	Georgia .....	-	3	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Idaho .....	-	4	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	9.7
	Nevada .....	E1	6	3	.1	5.3	.1	.2	3.9	16.3	4.5	18.3	2.4	(NA)	(NA)
	Pennsylvania .....	-	7	4	.2	4.4	.1	.2	1.8	10.6	3.7	13.6	.7	.1	3.9
149	Miscellaneous nonmetallic minerals, except fuels .....	-	352	86	7.0	161.9	4.8	9.8	101.1	438.0	223.7	615.7	46.0	6.0	282.5
	Arizona .....	E2	17	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Arkansas .....	E1	11	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	California .....	-	38	9	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.3	68.4
	Colorado .....	-	12	3	.2	3.2	.1	.2	1.7	8.3	5.1	12.3	1.1	AA	(D)
	Illinois .....	E1	9	3	.1	2.9	.1	.2	2.4	5.4	5.0	9.6	.8	(NA)	(NA)
	Florida .....	-	25	2	.2	3.8	.1	.3	2.7	14.0	6.9	18.1	2.8	.2	7.4
	Louisiana .....	-	6	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
	Massachusetts .....	-	4	2	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
	Michigan .....	-	10	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Montana .....	-	9	5	.4	10.6	.3	.7	7.4	32.7	14.9	44.4	3.2	.4	22.0
	Nevada .....	-	14	4	.3	6.9	.2	.5	4.9	24.1	14.7	37.0	1.8	AA	(D)
	New Mexico .....	E1	9	3	.1	3.2	.1	.2	2.3	10.2	(D)	14.7	(D)	AA	(D)
	New York .....	-	13	5	.5	11.5	.4	.7	8.2	36.9	(D)	46.6	(D)	BB	(D)
	North Carolina .....	-	16	6	.4	8.9	.4	.7	6.4	18.8	20.9	36.5	3.2	.3	10.2
	Oregon .....	E3	10	2	.1	2.4	.1	.2	1.9	9.0	4.5	12.7	.7	(NA)	(NA)
	South Carolina .....	-	5	2	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)
	Texas .....	-	19	6	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
	Utah .....	E1	10	2	.1	3.7	.1	.2	2.2	10.4	3.7	12.7	1.4	BB	(D)
	Vermont .....	-	7	3	.2	5.3	.1	.3	2.8	15.5	8.2	22.0	1.7	.3	10.5
	Washington .....	-	10	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	AA	(D)

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

<sup>2</sup>Statistics for some producing States and offshore areas are withheld to avoid disclosing data for individual companies. However, for such States and offshore areas with 100 employees or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: AA—100 to 249 employees; BB—250 to 499 employees; CC—500 to 999 employees; EE—1,000 to 2,499 employees; FF—2,500 employees or more.

Table 3. Industry Statistics by Type of Company Ownership and Legal Form of Organization: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group, industry, type of company ownership, and legal form of organization	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
	All Industries .....	33 617	6 299	698.1	21 739.1	451.1	942.2	12 443.2	110 959.1	62 423.4	157 964.3	15 418.2
	Type of company ownership:											
	Multi-establishment companies .....	9 639	3 787	496.3	17 155.0	294.5	626.3	9 087.8	92 090.4	53 774.0	132 913.1	12 951.3
	Corporate ownership or control .....	9 201	3 648	476.7	16 525.1	280.4	595.8	8 664.8	88 044.9	51 453.4	126 859.0	12 639.4
	Noncorporate ownership .....	438	139	19.5	629.9	14.0	30.5	423.0	4 045.5	2 320.6	6 054.2	311.9
	Single-establishment companies .....	23 978	2 512	201.9	4 584.1	156.6	315.9	3 355.4	18 868.7	8 649.4	25 051.2	2 466.8
	Corporate ownership or control .....	16 803	2 197	167.3	3 876.8	129.9	262.9	2 837.2	14 985.2	7 096.7	20 101.9	1 980.0
	Noncorporate ownership .....	7 175	315	34.5	707.3	26.7	53.0	518.2	3 883.5	1 552.7	4 949.3	486.8
	Legal form of organization:											
	Corporate .....	26 004	5 845	644.0	20 401.8	410.3	858.7	11 502.0	103 030.1	58 550.1	146 960.8	14 619.4
	Noncorporate .....	7 613	454	54.1	1 337.3	40.8	83.5	941.2	7 929.0	3 873.2	11 003.5	798.7
	Individual proprietorships .....	2 301	92	12.1	231.9	8.9	17.6	157.9	1 178.9	475.9	1 526.0	128.7
	Partnerships .....	2 123	241	28.3	802.4	21.4	45.1	567.9	4 927.0	2 614.0	7 087.1	453.9
	Other and unknown .....	3 189	121	13.7	303.0	10.5	20.8	215.4	1 823.1	783.4	2 390.4	216.1
10	Metal mining .....	1 027	260	44.1	1 353.5	33.7	67.8	952.0	4 609.5	3 141.2	6 851.6	899.1
	Type of company ownership:											
	Multi-establishment companies .....	468	195	37.6	1 173.5	28.4	56.7	809.1	4 059.2	2 756.7	6 104.3	711.6
	Corporate ownership or control .....	450	182	33.5	1 045.5	25.0	49.8	707.2	3 623.4	2 418.2	5 371.8	669.9
	Noncorporate ownership .....	18	13	4.1	128.0	3.4	7.0	101.9	435.7	338.5	732.5	41.8
	Single-establishment companies .....	559	65	6.4	180.0	5.3	11.0	142.9	550.3	384.4	747.3	187.5
	Corporate ownership or control .....	387	54	5.0	140.1	4.0	8.5	109.9	402.3	300.8	540.0	163.1
	Noncorporate ownership .....	172	11	1.5	40.0	1.2	2.6	33.0	148.0	83.7	207.3	24.4
	Legal form of organization:											
	Corporate .....	837	236	38.5	1 185.6	29.0	58.2	817.1	4 025.8	2 719.0	5 911.8	833.0
	Noncorporate .....	190	24	5.6	168.0	4.6	9.5	134.9	583.7	422.2	939.8	66.2
	Individual proprietorships .....	26	1	.4	9.7	.3	.8	8.6	40.4	28.8	68.2	1.1
	Partnerships .....	100	22	5.0	152.6	4.1	8.4	121.5	535.8	384.4	856.4	63.8
	Other and unknown .....	64	1	.2	5.7	.2	.3	4.7	7.5	9.0	15.2	1.3
1011	Iron ores .....	51	16	7.1	224.2	5.6	11.2	165.8	767.9	618.5	1 362.4	24.0
	Type of company ownership:											
	Multi-establishment companies .....	26	16	7.0	222.1	5.5	11.0	164.3	762.1	611.0	1 350.6	22.4
	Corporate ownership or control .....	24	14	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	2	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	25	.1	2.1	.1	.2	1.5	5.8	7.5	11.8	1.6	1.6
	Corporate ownership or control .....	15	-.1	1.6	.1	1.1	1.1	4.4	5.9	9.0	1.3	1.3
	Noncorporate ownership .....	10	-.5	(Z)	(Z)	.1	.4	1.4	1.6	2.8	.2	.2
	Legal form of organization:											
	Corporate .....	39	14	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate .....	12	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Individual proprietorships .....	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	7	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown .....	4	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1021	Copper ores .....	61	33	13.9	404.8	10.6	20.9	282.7	1 301.3	1 053.4	2 149.7	205.0
	Type of company ownership:											
	Multi-establishment companies .....	46	29	12.5	370.8	9.5	18.5	255.4	1 190.2	980.4	1 967.2	203.4
	Corporate ownership or control .....	44	27	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	2	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	15	4	1.4	34.0	1.1	2.4	27.3	111.2	72.9	182.5	1.5
	Corporate ownership or control .....	8	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	7	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	52	30	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate .....	9	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Individual proprietorships .....	3	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	3	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown .....	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1031	Lead and zinc ores .....	39	19	2.0	58.3	1.4	3.0	40.0	176.2	104.1	268.3	11.9
	Type of company ownership:											
	Multi-establishment companies .....	27	16	1.8	52.4	1.3	2.7	34.8	168.9	94.6	252.9	10.6
	Corporate ownership or control .....	24	14	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	3	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	12	3	.2	5.9	.2	.3	5.1	7.3	9.5	15.5	1.3
	Corporate ownership or control .....	11	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	35	17	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate .....	4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1041	Gold ores .....	319	91	11.4	371.5	8.9	18.2	263.8	1 689.1	920.6	2 067.1	542.6
	Type of company ownership:											
	Multi-establishment companies .....	100	60	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control .....	96	58	8.4	276.7	6.5	13.1	191.5	1 354.0	706.0	1 674.6	385.4
	Noncorporate ownership .....	4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	219	31	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control .....	140	23	2.1	63.9	1.7	3.7	51.6	234.0	163.2	264.3	132.9
	Noncorporate ownership .....	79	8	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	236	81	10.4	340.5	8.2	16.8	243.1	1 588.0	869.2	1 938.9	518.3
	Noncorporate .....	83	10	1.0	30.9	.7	1.5	20.7	101.1	51.4	128.2	24.2
	Individual proprietorships .....	9	-	(Z)	.4	(Z)	.4	.5	.5	1.4	1.7	.1
	Partnerships .....	47	9	.9	27.4	.6	1.3	17.8	96.9	45.0	118.7	23.3
	Other and unknown .....	27	1	.1	3.1	.1	.2	2.6	3.7	5.0	7.8	.9
1044	Silver ores .....	53	10	1.7	51.5	1.5	3.1	41.2	125.1	80.8	193.8	12.2
	Type of company ownership:											
	Multi-establishment companies .....	18	10	1.6	48.6	1.4	3.0	38.8	118.3	72.6	179.8	11.0
	Corporate ownership or control .....	18	10	1.6	48.6	1.4	3.0	38.8	118.3	72.6	179.8	11.0
	Single-establishment companies .....	35	-	.1	2.9	.1	.2	2.4	6.9	8.2	13.9	1.2
	Corporate ownership or control .....	30	-	.1	2.6	.1	.2	2.2	6.4	7.6	12.9	1.1
	Noncorporate ownership .....	5	-	(Z)	.3	(Z)	.2	.2	.5	.6	1.0	.1



**Table 3. Industry Statistics by Type of Company Ownership and Legal Form of Organization: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group, industry, type of company ownership, and legal form of organization	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
1044	<b>Silver ores—Con.</b>											
	Legal form of organization:											
	Corporate.....	48	10	1.7	51.2	1.5	3.1	41.0	124.6	80.2	192.8	12.1
	Noncorporate.....	5	-	(Z)	.3	(Z)	(Z)	.2	.5	.6	1.0	.1
	Partnerships.....	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1061	<b>Ferroalloy ores, except vanadium</b>	58	7	1.3	46.2	.8	1.5	24.2	61.1	56.3	109.9	7.5
	Type of company ownership:											
	Multi-establishment companies.....	17	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control.....	17	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies.....	41	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control.....	34	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	7	-	(Z)	.5	(Z)	(Z)	.4	.7	.8	1.3	.1
	Legal form of organization:											
	Corporate.....	51	7	1.3	45.7	.8	1.5	23.8	60.5	55.6	108.6	7.4
	Noncorporate.....	7	-	(Z)	.5	(Z)	(Z)	.4	.7	.8	1.3	.1
	Other and unknown.....	7	-	(Z)	.5	(Z)	(Z)	.4	.7	.8	1.3	.1
1081	<b>Metal mining services</b>	268	42	2.8	80.8	2.2	4.6	59.8	175.6	101.3	251.3	25.7
	Type of company ownership:											
	Multi-establishment companies.....	143	25	1.8	53.0	1.4	3.0	39.1	125.1	65.7	171.6	19.3
	Corporate ownership or control.....	143	25	1.8	53.0	1.4	3.0	39.1	125.1	65.7	171.6	19.3
	Single-establishment companies.....	125	17	1.0	27.8	.8	1.6	20.7	50.5	35.6	79.7	6.4
	Corporate ownership or control.....	86	15	.8	22.8	.6	1.2	16.6	36.8	24.1	56.6	4.3
	Noncorporate ownership.....	39	2	.2	5.0	.2	.4	4.1	13.7	11.5	23.1	2.1
	Legal form of organization:											
	Corporate.....	229	40	2.6	75.8	2.0	4.3	55.7	162.0	89.8	228.2	23.6
	Noncorporate.....	39	2	.2	5.0	.2	.4	4.1	13.7	11.5	23.1	2.1
	Individual proprietorships.....	8	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships.....	20	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	11	-	(Z)	.4	(Z)	(Z)	.3	.8	.4	1.2	.1
1094	<b>Uranium-radium-vanadium ores</b>	101	27	2.3	72.1	1.5	2.9	43.6	174.7	115.8	251.5	39.0
	Type of company ownership:											
	Multi-establishment companies.....	71	24	2.0	66.2	1.3	2.5	39.2	161.4	99.1	236.7	23.9
	Corporate ownership or control.....	66	21	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	5	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies.....	30	3	.2	6.0	.2	.3	4.4	13.3	16.6	14.8	15.1
	Corporate ownership or control.....	22	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	8	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate.....	88	24	2.1	68.6	1.4	2.7	40.9	172.2	(D)	245.2	(D)
	Noncorporate.....	13	3	.1	3.5	.1	.2	2.7	2.5	(D)	6.3	(D)
	Individual proprietorships.....	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships.....	7	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1099	<b>Miscellaneous metal ores, n.e.c.</b>	77	15	1.6	44.1	1.2	2.3	30.9	138.4	90.4	197.5	31.3
	Type of company ownership:											
	Multi-establishment companies.....	20	8	1.1	32.8	.8	1.5	22.2	113.1	64.5	152.0	25.6
	Corporate ownership or control.....	18	6	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	2	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies.....	57	7	.5	11.4	.4	.8	8.7	25.2	25.9	45.5	5.7
	Corporate ownership or control.....	41	7	.5	10.2	.4	.7	7.8	24.0	24.1	42.7	5.4
	Noncorporate ownership.....	16	-	.1	1.2	(Z)	.1	1.0	1.2	1.9	2.8	.3
	Legal form of organization:											
	Corporate.....	59	13	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate.....	18	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Individual proprietorships.....	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships.....	9	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	7	-	(Z)	.7	(Z)	(Z)	.6	1.1	1.2	2.1	.2
12	<b>Coal mining</b>	3 905	1 418	163.4	5 567.0	128.7	259.3	4 251.4	17 067.9	10 552.5	25 955.2	1 665.2
	Type of company ownership:											
	Multi-establishment companies.....	1 232	762	121.8	4 482.6	92.8	188.2	3 330.4	13 981.0	8 726.7	21 321.3	1 386.3
	Corporate ownership or control.....	1 196	744	118.3	4 355.0	89.9	182.4	3 230.5	13 438.6	8 508.9	20 587.3	1 360.2
	Noncorporate ownership.....	36	18	3.5	127.6	2.9	5.8	99.9	542.4	217.8	734.0	26.1
	Single-establishment companies.....	2 673	656	41.6	1 084.5	35.9	71.1	921.0	3 087.0	1 825.7	4 633.9	278.8
	Corporate ownership or control.....	2 102	594	36.9	968.4	31.9	63.0	820.9	2 715.7	1 619.0	4 089.4	245.3
	Noncorporate ownership.....	571	62	4.7	116.1	4.1	8.1	100.1	371.2	206.7	544.5	33.5
	Legal form of organization:											
	Corporate.....	3 298	1 338	155.2	5 323.4	121.8	245.4	4 051.4	16 154.3	10 127.9	24 676.7	1 605.5
	Noncorporate.....	607	80	8.2	243.6	6.9	13.9	200.1	913.6	424.5	1 278.5	59.6
	Individual proprietorships.....	128	17	1.5	33.8	1.2	2.4	28.1	125.7	44.6	164.1	6.3
	Partnerships.....	200	38	4.5	149.7	3.8	7.8	122.2	582.1	269.0	819.0	32.1
	Other and unknown.....	279	25	2.2	60.1	1.9	3.7	49.8	205.8	110.9	295.4	21.2
1221	<b>Bituminous coal and lignite surface mining</b>	1 804	612	63.8	2 204.0	48.0	99.5	1 580.1	7 893.7	6 460.3	13 617.5	736.4
	Type of company ownership:											
	Multi-establishment companies.....	638	371	46.8	1 777.5	33.4	68.5	1 223.2	6 423.3	5 352.3	11 193.5	582.2
	Corporate ownership or control.....	613	358	44.7	1 695.5	31.8	65.0	1 163.1	6 058.2	5 212.5	10 705.5	565.2
	Noncorporate ownership.....	25	13	2.2	82.0	1.7	3.5	60.1	365.2	139.8	488.0	17.0
	Single-establishment companies.....	1 166	241	17.0	426.5	14.6	31.1	356.9	1 470.4	1 107.9	2 424.0	154.2
	Corporate ownership or control.....	886	219	14.8	372.7	12.7	27.1	311.3	1 261.8	970.1	2 100.4	131.5
	Noncorporate ownership.....	280	22	2.2	53.8	1.9	3.9	45.6	208.6	137.9	323.7	22.8
	Legal form of organization:											
	Corporate.....	1 499	577	59.5	2 068.2	44.5	92.1	1 474.4	7 319.9	6 182.6	12 805.8	696.7
	Noncorporate.....	305	35	4.3	135.8	3.5	7.4	105.7	573.8	277.7	811.7	39.8
	Individual proprietorships.....	78	5	.5	8.6	.4	.8	7.2	32.2	20.0	48.9	3.3
	Partnerships.....	102	20	2.7	92.9	2.1	4.6	70.6	423.6	193.3	596.3	20.6
	Other and unknown.....	125	10	1.2	34.4	1.0	2.1	27.9	117.9	64.4	166.5	15.9

Table 3. **Industry Statistics by Type of Company Ownership and Legal Form of Organization:**  
**1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group, industry, type of company ownership, and legal form of organization	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
1222	<b>Bituminous coal underground mining -----</b>	<b>1 703</b>	<b>723</b>	<b>93.7</b>	<b>3 206.1</b>	<b>75.8</b>	<b>149.9</b>	<b>2 545.2</b>	<b>8 785.2</b>	<b>3 821.8</b>	<b>11 729.3</b>	<b>877.7</b>
	Type of company ownership:											
	Multi-establishment companies -----	536	369	73.0	2 651.1	57.8	116.7	2 066.1	7 407.2	3 244.6	9 875.0	776.8
	Corporate ownership or control -----	526	364	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	10	5	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies -----	1 167	354	20.6	555.0	18.0	33.3	479.1	1 378.0	577.2	1 854.3	100.8
	Corporate ownership or control -----	968	318	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	199	36	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate -----	1 494	682	90.3	3 108.3	72.9	144.3	2 459.2	8 471.7	3 687.5	11 299.6	859.7
	Noncorporate -----	209	41	3.3	97.8	2.9	5.6	86.1	313.5	134.3	429.8	18.0
	Individual proprietorships -----	27	10	.8	22.4	.7	1.4	18.3	85.9	20.7	104.4	2.3
	Partnerships -----	65	17	1.6	52.5	1.4	2.8	48.3	147.1	70.4	206.5	10.9
	Other and unknown -----	117	14	.9	22.9	.8	1.4	19.5	80.5	43.2	118.9	4.8
1231	<b>Anthracite mining -----</b>	<b>107</b>	<b>26</b>	<b>1.9</b>	<b>41.2</b>	<b>1.6</b>	<b>2.9</b>	<b>32.4</b>	<b>109.4</b>	<b>109.0</b>	<b>206.3</b>	<b>12.1</b>
	Type of company ownership:											
	Multi-establishment companies -----	28	12	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control -----	28	12	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	79	14	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies -----	50	13	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control -----	29	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	29	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate -----	78	25	1.8	38.2	1.4	2.6	29.6	101.3	104.6	194.1	11.8
	Noncorporate -----	29	1	.2	3.0	.2	.3	2.8	8.2	4.4	12.2	.3
	Individual proprietorships -----	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships -----	17	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown -----	9	-	(Z)	.5	(Z)	(Z)	.5	1.3	.8	2.0	.1
1241	<b>Coal mining services -----</b>	<b>291</b>	<b>57</b>	<b>4.0</b>	<b>115.7</b>	<b>3.3</b>	<b>6.8</b>	<b>93.7</b>	<b>279.6</b>	<b>161.4</b>	<b>402.0</b>	<b>39.0</b>
	Type of company ownership:											
	Multi-establishment companies -----	30	10	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control -----	29	10	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies -----	261	47	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control -----	198	44	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	63	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate -----	227	54	3.7	108.7	3.0	6.3	88.2	261.4	153.2	377.2	37.4
	Noncorporate -----	64	3	.4	7.0	.3	.5	5.5	18.2	8.2	24.8	1.6
	Individual proprietorships -----	20	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships -----	16	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown -----	28	1	.1	2.4	.1	.2	2.0	6.1	2.5	8.0	.5
13	<b>Oil and gas extraction -----</b>	<b>22 910</b>	<b>3 167</b>	<b>377.9</b>	<b>11 960.5</b>	<b>206.2</b>	<b>437.3</b>	<b>5 283.3</b>	<b>80 048.8</b>	<b>44 031.7</b>	<b>112 363.0</b>	<b>11 717.4</b>
	Type of company ownership:											
	Multi-establishment companies -----	5 416	1 780	256.4	9 353.9	115.4	254.4	3 511.1	66 833.9	38 664.3	95 515.0	9 983.2
	Corporate ownership or control -----	5 096	1 697	247.2	9 059.8	109.6	241.1	3 345.2	64 039.5	37 009.9	91 299.8	9 749.6
	Noncorporate ownership -----	320	83	9.2	294.1	5.7	13.4	165.9	2 794.4	1 654.3	4 215.2	233.6
	Single-establishment companies -----	17 494	1 387	121.5	2 606.6	90.8	182.9	1 772.2	13 214.8	5 367.4	16 848.0	1 734.2
	Corporate ownership or control -----	12 096	1 196	99.1	2 168.2	74.1	149.8	1 473.7	10 181.9	4 288.4	13 123.7	1 346.6
	Noncorporate ownership -----	5 398	191	22.4	438.4	16.7	33.1	298.6	3 032.9	1 079.0	3 724.3	387.6
	Legal form of organization:											
	Corporate -----	17 192	2 893	346.3	11 228.0	183.7	390.9	4 818.9	74 221.5	41 298.3	104 423.6	11 096.2
	Noncorporate -----	5 718	274	31.6	732.5	26.5	46.4	464.5	5 827.3	2 733.3	7 939.4	621.2
	Individual proprietorships -----	1 880	64	8.7	161.5	6.1	11.9	99.7	938.7	363.5	1 192.0	110.2
	Partnerships -----	1 517	135	14.0	377.5	9.8	21.4	236.3	3 418.9	1 773.8	4 861.3	331.4
	Other and unknown -----	2 321	75	8.9	193.4	6.6	13.2	128.5	1 469.7	596.1	1 886.2	179.6
1311	<b>Crude petroleum and natural gas -----</b>	<b>10 203</b>	<b>1 171</b>	<b>198.8</b>	<b>7 510.0</b>	<b>69.4</b>	<b>142.3</b>	<b>2 153.8</b>	<b>67 954.9</b>	<b>19 112.2</b>	<b>76 518.1</b>	<b>10 549.0</b>
	Type of company ownership:											
	Multi-establishment companies -----	2 760	855	162.2	6 591.8	48.1	100.5	1 686.0	58 602.3	15 971.7	65 412.6	9 161.4
	Corporate ownership or control -----	2 562	815	158.0	6 444.2	46.4	97.1	1 639.6	56 387.2	15 698.6	63 124.5	8 961.3
	Noncorporate ownership -----	198	40	4.2	147.6	1.6	3.3	46.4	2 215.0	273.1	2 288.1	200.1
	Single-establishment companies -----	7 443	316	36.5	918.2	21.4	41.8	467.8	9 352.7	3 140.5	11 105.5	1 387.6
	Corporate ownership or control -----	4 706	250	26.8	706.1	15.2	29.9	348.7	6 909.9	2 352.9	8 201.5	1 061.3
	Noncorporate ownership -----	2 737	66	9.8	212.2	6.2	11.9	119.1	2 442.8	787.6	2 904.0	326.3
	Legal form of organization:											
	Corporate -----	7 268	1 065	184.8	7 150.2	61.6	127.1	1 988.3	63 297.1	18 051.5	71 326.0	10 022.6
	Noncorporate -----	2 935	106	14.0	359.7	7.8	15.2	165.5	4 657.8	1 067.0	5 192.1	526.4
	Individual proprietorships -----	750	29	4.1	87.5	2.2	4.3	40.8	725.3	265.9	901.7	89.4
	Partnerships -----	876	60	5.9	180.0	3.2	6.4	79.4	2 733.0	445.4	2 897.7	280.7
	Other and unknown -----	1 309	17	4.0	92.2	2.3	4.5	45.3	1 199.5	349.4	1 392.7	156.2
1321	<b>Natural gas liquids -----</b>	<b>714</b>	<b>210</b>	<b>12.7</b>	<b>433.0</b>	<b>9.7</b>	<b>20.2</b>	<b>320.0</b>	<b>4 024.9</b>	<b>21 107.4</b>	<b>24 749.5</b>	<b>382.7</b>
	Type of company ownership:											
	Multi-establishment companies -----	681	206	12.3	424.1	9.4	19.7	313.1	3 973.7	20 465.5	24 066.8	372.4
	Corporate ownership or control -----	639	196	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	42	10	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies -----	33	4	.3	9.0	.3	.6	6.9	51.2	641.9	682.7	10.4
	Corporate ownership or control -----	21	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership -----	12	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate -----	660	198	12.0	411.4	9.1	19.0	302.8	3 747.6	19 784.2	23 161.4	370.3
	Noncorporate -----	54	12	.7	21.6	.6	1.2	17.2	277.3	1 323.2	1 588.2	12.4
	Individual proprietorships -----	6	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships -----	41	8	.5	15.5	.4	.8	12.0	226.6	1 130.3	1 349.2	7.7
	Other and unknown -----	7	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1381	<b>Drilling oil and gas wells -----</b>	<b>2 591</b>	<b>620</b>	<b>55.0</b>	<b>1 318.0</b>	<b>45.6</b>	<b>93.3</b>	<b>1 012.3</b>	<b>2 549.4</b>	<b>1 397.5</b>	<b>3 625.9</b>	<b>321.0</b>
	Type of company ownership:											
	Multi-establishment companies -----	619	279	29.6	794.5	23.6	50.1	583.0	1 383.5	853.3	2 030.3	206.5
	Corporate ownership or control -----	575	259	26.4	701.7	20.8	43.8	504.1	1 189.9	800.5	1 803.6	186.8
	Noncorporate ownership -----	44	20	3.2	92.8	2.8	6.3	78.9	193.6	52.7	226.7	19.6



**Table 3. Industry Statistics by Type of Company Ownership and Legal Form of Organization: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group, industry, type of company ownership, and legal form of organization	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
1381	<b>Drilling oil and gas wells—Con.</b>											
	Type of company ownership—Con.											
	Single-establishment companies .....	1 972	341	25.4	523.4	22.0	43.2	429.3	1 165.9	544.3	1 595.7	114.5
	Corporate ownership or control .....	1 450	295	21.4	446.2	18.5	36.4	364.6	972.1	458.1	1 342.8	87.5
	Noncorporate ownership .....	522	46	4.0	77.3	3.5	6.9	64.7	193.8	86.2	252.9	27.1
	Legal form of organization:											
	Corporate .....	2 025	554	47.8	1 147.9	39.3	80.2	868.7	2 162.0	1 258.6	3 146.4	274.3
	Noncorporate .....	566	66	7.2	170.0	6.2	13.2	143.7	387.4	138.9	479.6	46.7
	Individual proprietorships .....	173	8	1.0	18.8	.9	1.9	16.5	47.8	18.2	60.3	5.7
	Partnerships .....	187	38	4.5	114.1	3.8	8.2	93.2	240.6	92.7	302.0	31.2
	Other and unknown .....	206	20	1.7	37.1	1.5	3.0	34.0	99.0	28.0	117.3	9.8
1382	<b>Oil and gas field exploration services.....</b>	<b>1 917</b>	<b>143</b>	<b>16.9</b>	<b>452.1</b>	<b>12.8</b>	<b>27.1</b>	<b>310.7</b>	<b>771.3</b>	<b>394.1</b>	<b>1 096.2</b>	<b>69.3</b>
	Type of company ownership:											
	Multi-establishment companies .....	275	81	9.9	293.8	7.0	15.6	190.1	447.5	234.7	638.8	43.5
	Corporate ownership or control .....	271	81	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	4	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	1 642	62	7.0	158.3	5.8	11.5	120.7	323.8	159.4	457.4	25.8
	Corporate ownership or control .....	1 262	51	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	380	11	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	1 533	132	15.8	431.8	11.9	25.4	295.2	719.3	368.5	1 023.1	64.7
	Noncorporate .....	384	11	1.1	20.4	.9	1.8	15.5	52.0	25.6	73.2	4.5
	Individual proprietorships .....	143	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	97	6	.4	8.5	.4	.8	6.6	25.2	12.9	35.6	2.5
	Other and unknown .....	144	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1389	<b>Oil and gas field services, n.e.c. ....</b>	<b>7 485</b>	<b>1 023</b>	<b>94.6</b>	<b>2 247.5</b>	<b>68.7</b>	<b>154.3</b>	<b>1 486.4</b>	<b>4 748.2</b>	<b>2 020.4</b>	<b>6 373.2</b>	<b>395.4</b>
	Type of company ownership:											
	Multi-establishment companies .....	1 081	359	42.4	1 249.8	27.3	68.6	738.9	2 427.0	1 139.1	3 366.5	199.5
	Corporate ownership or control .....	1 049	346	41.1	1 214.0	26.4	65.7	712.4	2 297.4	1 076.3	3 177.8	195.8
	Noncorporate ownership .....	32	13	1.3	35.7	.9	2.8	26.5	129.6	62.9	188.7	3.7
	Single-establishment companies .....	6 404	664	52.2	997.7	41.4	85.8	747.5	2 321.3	881.3	3 006.7	195.9
	Corporate ownership or control .....	4 657	598	44.8	872.7	35.3	73.5	651.4	1 998.1	759.3	2 588.9	168.5
	Noncorporate ownership .....	1 747	66	7.4	125.0	6.1	12.2	96.1	323.2	122.0	417.8	27.4
	Legal form of organization:											
	Corporate .....	5 706	944	85.9	2 086.7	61.8	139.2	1 363.8	4 295.5	1 835.5	5 766.8	364.3
	Noncorporate .....	1 779	79	8.7	160.7	7.0	15.1	122.6	452.7	184.9	606.5	31.1
	Individual proprietorships .....	808	23	3.2	47.4	2.6	5.0	36.4	127.1	41.8	157.5	11.4
	Partnerships .....	316	23	2.7	59.5	2.1	5.2	45.1	193.5	92.6	276.9	9.2
	Other and unknown .....	655	33	2.8	53.9	2.3	4.9	41.1	132.2	50.5	172.1	10.6
14	<b>Nonmetallic minerals, except fuels .....</b>	<b>5 775</b>	<b>1 454</b>	<b>112.7</b>	<b>2 858.0</b>	<b>82.5</b>	<b>177.9</b>	<b>1 956.4</b>	<b>9 232.9</b>	<b>4 698.0</b>	<b>12 794.5</b>	<b>1 136.4</b>
	Type of company ownership:											
	Multi-establishment companies .....	2 523	1 050	80.4	2 145.0	57.9	126.9	1 437.1	7 216.4	3 626.3	9 972.5	870.1
	Corporate ownership or control .....	2 459	1 025	77.7	2 064.8	55.9	122.5	1 381.8	6 943.3	3 516.4	9 600.0	859.7
	Noncorporate ownership .....	64	25	2.8	80.3	2.0	4.4	55.3	273.0	109.8	372.5	10.4
	Single-establishment companies .....	3 252	404	32.3	713.0	24.6	50.9	519.3	2 016.6	1 071.8	2 822.0	266.3
	Corporate ownership or control .....	2 218	353	26.3	600.0	19.9	41.7	432.8	1 685.3	888.5	2 348.8	225.0
	Noncorporate ownership .....	1 034	51	5.9	112.9	4.7	9.3	86.5	331.3	183.3	473.3	41.3
	Legal form of organization:											
	Corporate .....	4 677	1 378	104.0	2 664.8	75.8	164.2	1 814.6	8 628.6	4 404.9	11 948.8	1 084.7
	Noncorporate .....	1 098	76	8.7	193.2	6.7	13.7	141.8	604.4	293.1	845.7	51.8
	Individual proprietorships .....	267	10	1.5	26.9	1.2	2.6	21.6	74.0	38.9	101.8	11.2
	Partnerships .....	306	46	4.8	122.5	3.7	7.5	87.9	390.3	186.7	550.3	26.6
	Other and unknown .....	525	20	2.3	43.8	1.8	3.6	32.3	140.1	67.5	193.6	14.0
1411	<b>Dimension stone.....</b>	<b>149</b>	<b>19</b>	<b>1.3</b>	<b>24.5</b>	<b>1.1</b>	<b>2.0</b>	<b>17.7</b>	<b>64.7</b>	<b>25.2</b>	<b>85.8</b>	<b>4.0</b>
	Type of company ownership:											
	Multi-establishment companies .....	37	7	.5	11.4	.4	.8	7.5	27.6	9.0	35.4	1.2
	Corporate ownership or control .....	36	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	112	12	.8	13.1	.6	1.2	10.2	37.1	16.2	50.4	2.8
	Corporate ownership or control .....	55	9	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	57	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	91	16	1.1	20.5	.9	1.6	14.6	52.7	19.3	68.7	3.3
	Noncorporate .....	58	3	.3	3.9	.2	.4	3.0	12.0	5.9	17.1	.8
	Individual proprietorships .....	21	1	.1	1.2	.1	.1	.9	3.0	1.6	4.3	.2
	Partnerships .....	12	-	.1	.9	(Z)	.1	.7	3.3	1.6	4.7	.2
	Other and unknown .....	25	2	.1	1.9	.1	.2	1.4	5.7	2.7	8.0	.4
1422	<b>Crushed and broken limestone .....</b>	<b>1 335</b>	<b>456</b>	<b>28.9</b>	<b>702.3</b>	<b>21.6</b>	<b>47.0</b>	<b>482.9</b>	<b>2 091.4</b>	<b>1 161.8</b>	<b>2 914.4</b>	<b>338.7</b>
	Type of company ownership:											
	Multi-establishment companies .....	845	347	21.5	540.6	15.9	35.1	367.2	1 655.8	906.1	2 288.6	273.3
	Corporate ownership or control .....	824	336	20.9	526.3	15.5	34.2	358.4	1 620.9	893.1	2 243.1	271.0
	Noncorporate ownership .....	21	11	.6	14.3	.5	1.0	8.8	34.9	13.0	45.5	2.3
	Single-establishment companies .....	490	109	7.4	161.8	5.7	11.9	115.7	435.6	255.7	625.8	65.4
	Corporate ownership or control .....	374	101	6.5	146.9	4.9	10.4	103.7	392.2	230.5	563.8	59.0
	Noncorporate ownership .....	116	8	.9	14.9	.8	1.5	11.9	43.4	25.1	62.0	6.5
	Legal form of organization:											
	Corporate .....	1 198	437	27.4	673.1	20.4	44.6	462.1	2 013.1	1 123.7	2 806.8	329.9
	Noncorporate .....	137	19	1.5	29.2	1.2	2.4	20.8	78.3	38.1	107.6	8.8
	Individual proprietorships .....	30	3	.3	4.7	.2	.5	3.9	12.0	8.2	17.7	2.5
	Partnerships .....	51	11	.9	18.5	.6	1.4	11.9	44.4	20.6	61.2	3.8
	Other and unknown .....	56	5	.4	6.0	.3	.6	5.0	21.8	9.3	28.6	2.5
1423	<b>Crushed and broken granite .....</b>	<b>238</b>	<b>129</b>	<b>6.5</b>	<b>168.6</b>	<b>5.0</b>	<b>11.7</b>	<b>120.4</b>	<b>696.2</b>	<b>339.2</b>	<b>922.7</b>	<b>112.7</b>
	Type of company ownership:											
	Multi-establishment companies .....	174	117	5.5	143.1	4.2	9.9	101.9	598.0	292.5	794.5	96.0
	Corporate ownership or control .....	174	117	5.5	143.1	4.2	9.9	101.9	598.0	292.5	794.5	96.0
	Noncorporate ownership .....	64	12	1.0	25.5	.8	1.8	18.5	98.2	46.7	128.2	16.7
	Single-establishment companies .....	53	12	1.0	24.1	.8	1.7	17.8	94.5	44.9	123.1	16.4
	Corporate ownership or control .....	53	12	1.0	24.1	.8	1.7	17.8	94.5	44.9	123.1	16.4
	Noncorporate ownership .....	11	-	.1	1.4	(Z)	.1	.7	3.7	1.8	5.2	.3

**Table 3. Industry Statistics by Type of Company Ownership and Legal Form of Organization: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group, industry, type of company ownership, and legal form of organization	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
1423	<b>Crushed and broken granite—Con.</b>											
	Legal form of organization:											
	Corporate.....	227	129	6.4	167.2	4.9	11.6	119.7	692.5	337.4	917.5	112.4
	Noncorporate.....	11	-	.1	1.4	(Z)	.1	.7	3.7	1.8	5.2	.3
	Individual proprietorships.....	5	-	(Z)	.5	(Z)	.1	.4	1.3	.5	1.7	.1
	Partnerships.....	4	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1429	<b>Crushed and broken stone, n.e.c.</b>	429	126	8.3	210.9	6.2	13.7	150.5	677.8	322.3	931.0	69.2
	Type of company ownership:											
	Multi-establishment companies.....	170	86	5.2	139.7	3.8	8.6	96.5	468.8	208.2	634.2	42.8
	Corporate ownership or control.....	168	86	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies.....	259	40	3.1	71.2	2.4	5.1	54.0	209.0	114.2	296.8	26.4
	Corporate ownership or control.....	179	38	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	80	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate.....	347	124	7.9	202.8	5.9	13.0	144.1	652.1	309.9	896.4	65.6
	Noncorporate.....	82	2	.4	8.1	.3	.7	6.4	25.8	12.4	34.6	3.6
	Individual proprietorships.....	27	1	.1	2.4	.1	.2	1.9	8.6	3.5	10.7	1.4
	Partnerships.....	23	-	.1	2.0	.1	.2	1.6	6.2	3.3	8.0	1.5
	Other and unknown.....	32	1	.2	3.7	.1	.2	2.8	10.9	5.7	15.9	.7
1442	<b>Construction sand and gravel</b>	2 559	371	28.9	673.0	21.1	45.4	489.3	2 011.6	899.3	2 696.8	214.1
	Type of company ownership:											
	Multi-establishment companies.....	810	210	14.4	349.0	10.2	22.8	250.5	1 097.1	447.9	1 441.2	103.8
	Corporate ownership or control.....	797	206	14.1	342.6	10.0	22.3	245.7	1 068.8	429.8	1 399.1	99.5
	Noncorporate ownership.....	13	4	.3	6.4	.2	.5	4.7	28.3	18.0	42.1	4.3
	Single-establishment companies.....	1 749	161	14.5	324.0	10.9	22.6	238.8	914.5	451.5	1 255.7	110.3
	Corporate ownership or control.....	1 140	137	11.5	264.5	8.6	17.8	192.0	745.8	367.1	1 020.7	92.1
	Noncorporate ownership.....	609	24	3.0	59.5	2.4	4.8	46.8	168.6	84.4	235.0	18.1
	Legal form of organization:											
	Corporate.....	1 937	343	25.6	607.2	18.5	40.1	437.7	1 814.6	796.9	2 419.8	191.6
	Noncorporate.....	622	28	3.3	65.9	2.6	5.3	51.5	197.0	102.5	277.0	22.4
	Individual proprietorships.....	144	4	.8	15.1	.7	1.4	12.2	39.9	19.3	53.6	5.6
	Partnerships.....	146	15	1.2	27.4	.9	1.9	21.6	90.4	52.4	132.2	10.6
	Other and unknown.....	332	9	1.3	23.4	1.0	2.0	17.7	66.7	30.8	91.2	6.3
1446	<b>Industrial sand</b>	191	65	3.9	98.9	2.8	5.7	61.5	308.3	157.4	442.1	23.5
	Type of company ownership:											
	Multi-establishment companies.....	117	57	3.2	83.5	2.2	4.7	50.7	265.8	131.7	377.7	19.8
	Corporate ownership or control.....	110	57	3.1	82.0	2.2	4.6	50.2	263.0	130.8	374.1	19.6
	Noncorporate ownership.....	7	-	.1	1.5	(Z)	(Z)	.4	2.8	1.0	3.6	.2
	Single-establishment companies.....	74	8	.7	15.4	.6	1.1	10.9	42.5	25.6	64.4	3.7
	Corporate ownership or control.....	59	7	.6	12.9	.5	.9	9.0	34.3	20.4	51.9	2.9
	Noncorporate ownership.....	15	1	.1	2.5	.1	.1	1.8	8.2	5.2	12.5	.9
	Legal form of organization:											
	Corporate.....	169	64	3.8	94.9	2.7	5.6	59.2	297.3	151.2	426.0	22.5
	Noncorporate.....	22	1	.1	4.0	.1	.2	2.3	11.0	6.2	16.1	1.1
	Individual proprietorships.....	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships.....	12	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	7	1	.1	2.5	.1	.1	1.6	8.4	4.4	12.0	.8
1455	<b>Kaolin and ball clay</b>	45	36	5.3	169.5	3.5	7.9	95.8	498.6	328.9	750.5	77.0
	Type of company ownership:											
	Multi-establishment companies.....	37	31	5.1	164.6	3.4	7.6	92.6	483.7	320.1	729.6	74.3
	Corporate ownership or control.....	36	30	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies.....	8	5	.2	4.9	.2	.3	3.1	14.9	8.7	20.9	2.7
	Corporate ownership or control.....	3	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	5	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate.....	39	33	5.1	164.3	3.4	7.6	92.3	481.3	319.8	725.8	75.3
	Noncorporate.....	6	3	.2	5.1	.1	.3	3.5	17.3	9.0	24.7	1.6
	Individual proprietorships.....	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships.....	4	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown.....	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1459	<b>Clay, ceramic, and refractory minerals, n.e.c.</b>	152	64	4.6	102.7	3.5	7.4	69.5	328.6	203.9	498.1	34.4
	Type of company ownership:											
	Multi-establishment companies.....	90	57	3.9	90.8	3.0	6.4	60.8	297.8	182.3	449.5	30.6
	Corporate ownership or control.....	84	53	3.8	86.2	2.9	6.2	58.6	287.3	175.6	433.4	29.4
	Noncorporate ownership.....	6	4	.2	4.6	.1	.2	2.2	10.5	6.7	16.0	1.2
	Single-establishment companies.....	62	7	.6	11.9	.5	1.0	8.7	30.8	21.5	48.6	3.8
	Corporate ownership or control.....	37	5	.5	9.2	.4	.7	6.6	23.0	16.0	35.9	3.1
	Noncorporate ownership.....	25	2	.2	2.7	.1	.3	2.1	7.8	5.5	12.7	.6
	Legal form of organization:											
	Corporate.....	121	58	4.2	95.4	3.3	6.9	65.1	310.3	191.6	469.4	32.5
	Noncorporate.....	31	6	.4	7.3	.2	.5	4.3	18.3	12.3	28.7	1.9
	Individual proprietorships.....	9	1	.1	1.1	.1	.1	.9	4.3	2.0	5.8	.5
	Partnerships.....	12	5	.2	5.7	.2	.3	3.1	12.8	9.1	20.6	1.3
	Other and unknown.....	10	-	(Z)	.4	(Z)	.1	.3	1.2	1.2	2.3	.1
1474	<b>Potash, soda, and borate minerals</b>	30	19	6.9	234.5	5.3	11.4	177.0	915.0	439.1	1 271.8	82.3
	Type of company ownership:											
	Multi-establishment companies.....	26	17	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control.....	19	16	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	7	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies.....	4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control.....	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership.....	3	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate.....	20	16	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)



**Table 3. Industry Statistics by Type of Company Ownership and Legal Form of Organization: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group, industry, type of company ownership, and legal form of organization	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
1474	<b>Potash, soda, and borate minerals—Con.</b>											
	Legal form of organization—Con.											
	Noncorporate .....	10	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Individual proprietorships .....	1	—	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	8	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown .....	1	—	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1475	<b>Phosphate rock.....</b>	39	26	5.3	139.5	3.9	7.7	92.5	595.1	365.9	886.7	74.3
	Type of company ownership:											
	Multi-establishment companies .....	28	22	5.2	136.8	3.8	7.5	90.6	587.4	354.3	868.1	73.6
	Corporate ownership or control .....	24	20	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	11	4	.1	2.7	.1	.2	1.9	7.8	11.6	18.6	.7
	Corporate ownership or control .....	9	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	2	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	33	23	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate .....	6	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	3	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown .....	3	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1479	<b>Chemical and fertilizer mineral mining, n.e.c. ....</b>	79	34	4.2	126.7	2.5	5.3	66.4	488.7	159.6	613.4	34.9
	Type of company ownership:											
	Multi-establishment companies .....	47	30	3.9	121.8	2.3	4.9	63.0	473.5	151.4	592.0	32.9
	Corporate ownership or control .....	46	29	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	32	4	.3	5.0	.2	.4	3.5	15.2	8.2	21.4	2.0
	Corporate ownership or control .....	22	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	10	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	68	32	4.1	124.5	2.4	5.2	64.9	480.3	156.3	602.5	34.0
	Noncorporate .....	11	2	.1	2.3	.1	.2	1.5	8.4	3.4	10.9	.9
	Individual proprietorships .....	1	—	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Partnerships .....	5	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other and unknown .....	5	—	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1481	<b>Nonmetallic minerals services, except fuels....</b>	177	23	1.8	44.9	1.3	2.8	31.9	119.0	71.8	165.4	25.4
	Type of company ownership:											
	Multi-establishment companies .....	34	9	.5	15.0	.4	.9	10.5	35.1	34.1	57.9	11.3
	Corporate ownership or control .....	34	9	.5	15.0	.4	.9	10.5	35.1	34.1	57.9	11.3
	Noncorporate ownership .....	1	—	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	143	14	1.2	29.8	.9	2.0	21.4	83.8	37.7	107.4	14.1
	Corporate ownership or control .....	108	14	1.1	27.2	.8	1.7	19.4	73.4	31.5	93.4	11.6
	Noncorporate ownership .....	35	—	.1	2.7	.1	.2	2.0	10.4	6.1	14.1	2.5
	Legal form of organization:											
	Corporate .....	142	23	1.6	42.2	1.2	2.6	29.9	108.5	65.7	151.3	22.9
	Noncorporate .....	35	—	.1	2.7	.1	.2	2.0	10.4	6.1	14.1	2.5
	Individual proprietorships .....	12	—	.1	.9	(Z)	.1	.7	2.2	2.0	3.7	.6
	Partnerships .....	9	—	(Z)	.6	(Z)	.1	.5	3.2	(D)	5.3	(D)
	Other and unknown .....	14	—	.1	1.1	(Z)	.1	.8	5.0	(D)	5.1	(D)
1499	<b>Miscellaneous nonmetallic minerals, n.e.c. ....</b>	352	86	7.0	161.9	4.8	9.8	101.1	438.0	223.7	615.7	46.0
	Type of company ownership:											
	Multi-establishment companies .....	108	60	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control .....	107	59	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Single-establishment companies .....	244	26	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corporate ownership or control .....	178	21	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Noncorporate ownership .....	66	5	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Legal form of organization:											
	Corporate .....	285	80	6.3	148.9	4.3	8.7	91.2	402.6	198.0	560.7	39.9
	Noncorporate .....	67	6	.7	13.0	.5	1.1	9.8	35.4	25.8	55.1	6.1
	Individual proprietorships .....	13	—	(Z)	.5	(Z)	.1	.4	1.8	1.2	2.9	.2
	Partnerships .....	17	5	.5	10.1	.4	.8	7.6	23.0	17.5	36.2	4.3
	Other and unknown .....	37	1	.1	2.4	.1	.2	1.8	10.6	7.0	16.0	1.6

Table 4a. **Summary Statistics by Major Group and Industry: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	All mineral industries	Major group 10, Metal mining				
		Total	Industry 1011, Iron ores	Industry 1021, Copper ores	Industry 1031, Lead and zinc ores	Industry 1041, Gold ores
Establishments during year ----- number ..	33 617	1 027	51	61	39	319
With 0 to 19 employees ----- do ..	27 318	767	35	28	20	228
With 20 to 99 employees ----- do ..	5 062	167	6	10	11	61
With 100 employees or more ----- do ..	1 237	93	10	23	8	30
All employees:						
Average for year ----- 1,000 ..	698.1	44.1	7.1	13.9	2.0	11.4
Payroll for year ----- mil dol ..	21 739.1	1 353.5	224.2	404.8	58.3	371.5
Production, development, and exploration workers:						
Average for year ----- 1,000 ..	451.1	33.7	5.6	10.6	1.4	8.9
March ----- do ..	437.5	31.6	4.7	10.2	1.4	8.3
May ----- do ..	447.3	32.9	5.2	10.6	1.4	8.6
August ----- do ..	457.1	34.5	6.3	10.7	1.4	9.1
November ----- do ..	461.0	35.6	6.1	11.0	1.5	9.7
Hours ----- millions ..	942.2	67.8	11.2	20.9	3.0	18.2
January to March ----- do ..	225.0	15.7	2.4	5.0	.7	4.2
April to June ----- do ..	233.9	16.6	2.7	5.2	.7	4.4
July to September ----- do ..	240.3	17.5	2.9	5.3	.8	4.8
October to December ----- do ..	242.9	17.9	3.2	5.4	.8	4.9
Wages ----- mil dol ..	12 443.2	952.0	165.8	282.7	40.0	263.8
Supplemental labor costs not included in payroll ----- do ..	4 960.0	325.4	69.0	87.7	12.3	83.4
Legally required expenditures, including Social Security contributions ----- do ..	2 103.2	137.4	28.9	35.4	5.0	34.5
Payments for voluntary programs ----- do ..	2 856.9	188.0	40.0	52.3	7.3	48.9
Value added by mining ----- do ..	110 959.1	4 609.5	767.9	1 301.3	176.2	1 689.1
Cost of supplies ----- do ..	62 423.4	3 141.2	618.5	1 053.4	104.1	920.6
Supplies used, minerals received, and purchased machinery installed ----- do ..	46 376.1	1 899.5	260.8	674.7	71.8	585.8
Resales ----- do ..	522.9	.6	(Z)	-	-	-
Purchased fuels consumed ----- do ..	2 685.2	211.9	65.6	70.3	2.9	36.6
Purchased electric energy:						
Quantity ----- mil kWh ..	68 176.8	14 103.1	6 261.8	4 815.9	414.9	1 315.7
Cost ----- mil dol ..	3 113.8	607.6	258.1	212.4	21.1	56.3
Electric energy generated less sold ----- mil kWh ..	6 005.6	472.4	-	(D)	(D)	(D)
Contract work ----- mil dol ..	9 725.4	421.5	34.0	96.0	8.3	242.0
Cost of purchased communication services ----- do ..	163.5	7.9	1.2	1.7	.2	2.4
Value of shipments and receipts ----- do ..	157 964.3	6 851.6	1 362.4	2 149.7	268.3	2 067.1
Value of resales ----- do ..	655.8	.7	(Z)	-	-	-
Beginning-of-year inventories ----- do ..	7 564.0	1 162.3	217.3	321.0	38.5	171.9
Detail by method of valuation:						
Subject to LIFO costing <sup>1</sup> ----- mil dol ..	762.5	62.0	(D)	-	(D)	-
LIFO reserve ----- do ..	367.6	26.2	(D)	-	(D)	-
LIFO value ----- do ..	394.9	35.8	(D)	-	(D)	-
Not subject to LIFO costing ----- do ..	5 079.4	962.9	192.8	291.4	24.6	(D)
Valuation method not reported <sup>2</sup> ----- do ..	1 528.3	100.9	3.4	9.4	(D)	(D)
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> ----- do ..	193.8	36.4	(D)	20.2	-	(D)
Detail by type of inventory:						
Mined or quarried products ----- mil dol ..	3 636.7	711.1	104.9	173.4	25.2	105.8
Supplies, parts, fuels, etc. ----- do ..	3 927.3	451.2	112.4	147.7	13.3	66.1
End-of-year inventories ----- do ..	7 380.0	1 171.7	214.2	354.4	33.6	219.1
Detail by method of valuation:						
Subject to LIFO costing <sup>1</sup> ----- do ..	628.9	55.9	(D)	-	(D)	-
LIFO reserve ----- do ..	211.2	18.1	(D)	-	(D)	-
LIFO value ----- do ..	417.8	37.8	(D)	-	(D)	-
Not subject to LIFO costing ----- do ..	4 992.7	970.7	193.3	320.0	22.9	178.0
Valuation method not reported <sup>2</sup> ----- do ..	1 577.7	100.3	2.9	9.7	(D)	(D)
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> ----- do ..	180.7	44.8	(D)	24.8	-	(D)
Detail by type of inventory:						
Mined or quarried products ----- mil dol ..	3 436.8	723.7	111.3	215.9	17.4	141.2
Supplies, parts, fuels, etc. ----- do ..	3 943.2	448.1	102.9	138.5	16.2	78.0

Item	Major group 10, Metal mining—Con.				
	Industry 1044, Silver ores	Industry 1061, Ferroalloy ores, except vanadium	Industry 1081, Metal mining services	Industry 1094, Uranium-radium-vanadium ores	Industry 1099, Miscellaneous metal ores, n.e.c.
Establishments during year ----- number ..	53	58	268	101	77
With 0 to 19 employees ----- do ..	43	51	226	74	62
With 20 to 99 employees ----- do ..	4	4	40	21	10
With 100 employees or more ----- do ..	6	3	2	6	5
All employees:					
Average for year ----- 1,000 ..	1.7	1.3	2.8	2.3	1.6
Payroll for year ----- mil dol ..	51.5	46.2	80.8	72.1	44.1
Production, development, and exploration workers:					
Average for year ----- 1,000 ..	1.5	.8	2.2	1.5	1.2
March ----- do ..	1.4	.9	2.0	1.5	1.2
May ----- do ..	1.4	.9	2.1	1.5	1.2
August ----- do ..	1.5	.7	2.1	1.5	1.2
November ----- do ..	1.6	.6	2.4	1.5	1.2
Hours ----- millions ..	3.1	1.5	4.6	2.9	2.3
January to March ----- do ..	.7	.4	1.0	.8	.6
April to June ----- do ..	.8	.4	1.1	.7	.6
July to September ----- do ..	.8	.4	1.3	.7	.6
October to December ----- do ..	.8	.3	1.3	.7	.6
Wages ----- mil dol ..	41.2	24.2	59.8	43.6	30.9



Table 4a. Summary Statistics by Major Group and Industry: 1987—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Major group 10, Metal mining—Con.				
	Industry 1044, Silver ores	Industry 1061, Ferroalloy ores, except vanadium	Industry 1081, Metal mining services	Industry 1094, Uranium-radium- vanadium ores	Industry 1099, Miscellaneous metal ores, n.e.c.
Supplemental labor costs not included in payroll.....mil dol..	16.5	13.1	19.2	15.0	9.3
Legally required expenditures, including Social Security contributions.....do..	6.2	5.1	11.6	7.0	3.6
Payments for voluntary programs.....do..	10.3	8.0	7.6	8.1	5.6
Value added by mining.....do..	125.1	61.1	175.6	174.7	138.4
Cost of supplies.....do..	80.8	56.3	101.3	115.8	90.4
Supplies used, minerals received, and purchased machinery installed.....do..	58.2	31.9	82.6	75.2	58.6
Resales.....do..	-	(D)	(D)	-	(D)
Purchased fuels consumed.....do..	6.0	3.8	13.5	6.5	6.8
Purchased electric energy: Quantity.....mil kWh..	281.0	446.0	24.1	313.2	230.7
Cost.....mil dol..	10.3	18.7	.9	18.3	11.5
Electric energy generated less sold.....mil kWh..	.2	(D)	-	(D)	(Z)
Contract work.....mil dol..	6.2	(D)	(D)	15.7	(D)
Cost of purchased communication services.....do..	.4	.4	.5	.6	.5
Value of shipments and receipts.....do..	193.8	109.9	251.3	251.5	197.5
Value of resales.....do..	-	(D)	(D)	-	(D)
Beginning-of-year inventories.....do..	47.8	60.0	21.9	248.0	35.9
Detail by method of valuation: Subject to LIFO costing <sup>1</sup> .....mil dol..	-	(D)	-	(D)	(D)
LIFO reserve.....do..	-	(D)	-	(D)	(D)
LIFO value.....do..	-	(D)	-	(D)	(D)
Not subject to LIFO costing.....do..	26.5	(D)	3.5	208.8	26.4
Valuation method not reported <sup>2</sup> .....do..	21.3	1.5	18.3	(D)	(D)
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> .....do..	-	-	-	5.0	-
Detail by type of inventory: Mined or quarried products.....mil dol..	34.7	27.2	(Z)	221.0	18.9
Supplies, parts, fuels, etc.....do..	13.1	32.8	21.9	26.9	17.1
End-of-year inventories.....do..	45.3	51.8	22.0	189.7	41.6
Detail by method of valuation: Subject to LIFO costing <sup>1</sup> .....do..	-	(D)	-	(D)	(D)
LIFO reserve.....do..	-	(D)	-	(D)	(D)
LIFO value.....do..	-	(D)	-	(D)	(D)
Not subject to LIFO costing.....do..	27.2	(D)	3.6	149.5	(D)
Valuation method not reported <sup>2</sup> .....do..	18.0	1.5	18.4	(D)	(D)
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> .....do..	-	-	-	5.0	-
Detail by type of inventory: Mined or quarried products.....mil dol..	31.0	21.8	(Z)	163.7	21.4
Supplies, parts, fuels, etc.....do..	14.3	29.9	22.0	26.1	20.2

  

Item	Major group 12, Bituminous coal and lignite mining				
	Total	Industry 1221, Bituminous coal and lignite surface mining	Industry 1222, Bituminous coal underground mining	Industry 1231, Anthracite mining	Industry 1241, Coal mining services
Establishments during year.....number..	3 905	1 804	1 703	107	291
With 0 to 19 employees.....do..	2 487	1 192	980	81	234
With 20 to 99 employees.....do..	1 030	457	496	24	53
With 100 employees or more.....do..	388	155	227	2	4
All employees: Average for year.....1,000..	163.4	63.8	93.7	1.9	4.0
Payroll for year.....mil dol..	5 567.0	2 204.0	3 206.1	41.2	115.7
Production, development, and exploration workers: Average for year.....1,000..	128.7	48.0	75.8	1.6	3.3
March.....do..	129.3	47.8	76.4	1.8	3.2
May.....do..	128.8	48.0	75.7	1.8	3.2
August.....do..	128.0	48.0	75.3	1.4	3.3
November.....do..	128.1	47.5	75.7	1.5	3.3
Hours.....millions..	259.3	99.5	149.9	2.9	6.8
January to March.....do..	65.4	24.9	38.0	.8	1.6
April to June.....do..	65.3	25.0	37.9	.8	1.7
July to September.....do..	63.9	24.8	36.6	.6	1.8
October to December.....do..	64.7	24.8	37.4	.7	1.8
Wages.....mil dol..	4 251.4	1 580.1	2 545.2	32.4	93.7
Supplemental labor costs not included in payroll.....do..	2 296.0	697.4	1 543.2	22.7	32.6
Legally required expenditures, including Social Security contributions.....do..	882.9	256.9	591.6	18.4	16.0
Payments for voluntary programs.....do..	1 413.1	440.5	951.6	4.3	16.6
Value added by mining.....do..	17 067.9	7 893.7	8 785.2	109.4	279.6
Cost of supplies.....do..	10 552.5	6 460.3	3 821.8	109.0	161.4
Supplies used, minerals received, and purchased machinery installed.....do..	7 617.6	4 916.1	2 501.6	86.7	113.2
Resales.....do..	315.2	223.0	84.3	(D)	(D)
Purchased fuels consumed.....do..	424.4	354.7	45.7	7.1	17.0
Purchased electric energy: Quantity.....mil kWh..	13 360.2	5 480.9	7 681.2	126.5	71.7
Cost.....mil dol..	585.8	237.6	338.0	7.6	2.6
Electric energy generated less sold.....mil kWh..	(D)	(D)	(D)	-	-
Contract work.....mil dol..	1 609.5	728.9	852.2	(D)	(D)
Cost of purchased communication services.....do..	18.7	8.3	9.6	.1	.7
Value of shipments and receipts.....do..	25 955.2	13 617.5	11 729.3	206.3	402.0
Value of resales.....do..	415.6	311.2	93.5	(D)	(D)

**Table 4a. Summary Statistics by Major Group and Industry: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendices]

Item	Major group 12, Bituminous coal and lignite mining				
	Total	Industry 1221, Bituminous coal and lignite surface mining	Industry 1222, Bituminous coal underground mining	Industry 1231, Anthracite mining	Industry 1241, Coal mining services
Beginning-of-year inventories -----mil dol--	1 585.3	863.0	661.7	41.9	18.8
Detail by method of valuation:					
Subject to LIFO costing <sup>1</sup> -----mil dol--	22.4	11.9	10.5	-	-
LIFO reserve -----do--	2.9	2.3	.7	-	-
LIFO value -----do--	19.5	9.6	9.8	-	-
Not subject to LIFO costing -----do--	1 261.3	697.0	545.2	12.0	7.2
Valuation method not reported <sup>2</sup> -----do--	287.3	150.3	95.6	29.9	11.5
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> -----do--	14.3	3.8	10.4	-	.1
Detail by type of inventory:					
Mined or quarried products -----mil dol--	802.0	395.9	374.3	31.8	-
Supplies, parts, fuels, etc. -----do--	783.3	467.1	287.4	10.1	18.8
End-of-year inventories -----do--	1 513.1	812.4	639.3	41.5	19.8
Detail by method of valuation:					
Subject to LIFO costing <sup>1</sup> -----do--	24.3	8.5	15.8	-	-
LIFO reserve -----do--	2.3	(D)	(D)	-	-
LIFO value -----do--	22.0	(D)	(D)	-	-
Not subject to LIFO costing -----do--	1 200.7	657.0	523.4	12.1	8.3
Valuation method not reported <sup>2</sup> -----do--	281.8	144.1	96.9	29.5	11.4
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> -----do--	6.3	2.9	3.2	-	.2
Detail by type of inventory:					
Mined or quarried products -----mil dol--	753.4	372.1	349.3	32.0	-
Supplies, parts, fuels, etc. -----do--	759.7	440.3	290.0	9.5	19.8

Item	Major group 13, Oil and gas extraction					
	Total	Industry 1311, Crude petroleum and natural gas	Industry 1321, Natural gas liquids	Industry 1381, Drilling oil and gas wells	Industry 1382, Oil and gas field exploration services	Industry 1389, Oil and gas field services, n.e.c.
Establishments during year -----number--	22 910	10 203	714	2 591	1 917	7 485
With 0 to 19 employees -----do--	19 743	9 032	504	1 971	1 774	6 462
With 20 to 99 employees -----do--	2 568	836	198	507	121	906
With 100 employees or more -----do--	599	335	12	113	22	117
All employees:						
Average for year -----1,000--	377.9	198.8	12.7	55.0	16.9	94.6
Payroll for year -----mil dol--	11 960.5	7 510.0	433.0	1 318.0	452.1	2 247.5
Production, development, and exploration workers:						
Average for year -----1,000--	206.2	69.4	9.7	45.6	12.8	68.7
March -----do--	198.8	68.5	9.7	41.5	12.4	66.6
May -----do--	201.6	69.6	9.7	42.4	12.5	67.3
August -----do--	209.2	69.6	9.7	47.2	12.9	69.7
November -----do--	214.8	69.8	9.5	51.1	13.3	71.0
Hours -----millions--	437.3	142.3	20.2	93.3	27.1	154.3
January to March -----do--	104.2	35.4	5.1	20.9	6.4	36.4
April to June -----do--	106.2	35.4	5.1	21.4	6.6	37.7
July to September -----do--	111.7	35.9	5.1	24.3	6.9	39.5
October to December -----do--	115.2	35.6	5.0	26.7	7.1	40.7
Wages -----mil dol--	5 283.3	2 153.8	320.0	1 012.3	310.7	1 486.4
Supplemental labor costs not included in payroll -----do--	1 699.3	901.9	90.9	255.0	72.1	379.4
Legally required expenditures, including Social Security contributions -----do--	801.1	342.2	30.6	171.3	40.9	216.2
Payments for voluntary programs -----do--	898.2	559.7	60.3	83.7	31.2	163.3
Value added by mining -----do--	80 048.8	67 954.9	4 024.9	2 549.4	771.3	4 748.2
Cost of supplies -----do--	44 031.7	19 112.2	21 107.4	1 397.5	394.1	2 020.4
Supplies used, minerals received, and purchased machinery installed -----do--	33 971.8	10 364.0	20 725.1	1 004.6	293.5	1 584.5
Resales -----do--	125.4	27.1	-	(D)	(D)	84.6
Purchased fuels consumed -----do--	1 333.2	860.1	100.1	159.0	31.7	182.2
Purchased electric energy:						
Quantity -----mil kWh--	28 418.1	24 842.1	2 610.1	131.2	152.2	682.4
Cost -----mil dol--	1 315.7	1 157.3	113.1	6.2	7.6	31.5
Electric energy generated less sold -----mil kWh--	4 595.3	2 905.7	1 109.5	576.4	(D)	(D)
Contract work -----mil dol--	7 285.6	6 703.6	169.1	(D)	(D)	137.6
Cost of purchased communication services -----do--	118.0	73.1	5.6	10.2	3.6	25.5
Value of shipments and receipts -----do--	112 363.0	76 518.1	24 749.5	3 625.9	1 096.2	6 373.2
Value of resales -----do--	142.2	31.3	-	(D)	(D)	94.5
Beginning-of-year inventories -----do--	3 002.6	2 314.5	127.4	142.9	55.3	362.5
Detail by method of valuation:						
Subject to LIFO costing <sup>1</sup> -----mil dol--	372.2	(D)	(D)	(D)	-	(D)
LIFO reserve -----do--	275.6	(D)	(D)	(D)	-	(D)
LIFO value -----do--	96.6	70.4	1.6	(D)	-	(D)
Not subject to LIFO costing -----do--	1 922.7	1 518.4	59.6	110.9	16.7	217.2
Valuation method not reported <sup>2</sup> -----do--	613.2	(D)	(D)	(D)	38.6	(D)
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> -----do--	94.6	43.7	49.8	.1	-	1.0
Detail by type of inventory:						
Mined or quarried products -----mil dol--	713.1	631.4	81.0	.1	-	.6
Supplies, parts, fuels, etc. -----do--	2 289.5	1 683.1	46.5	142.8	55.3	361.8
End-of-year inventories -----do--	2 933.1	2 182.3	157.4	148.1	68.9	376.4
Detail by method of valuation:						
Subject to LIFO costing <sup>1</sup> -----do--	253.1	(D)	4.0	(D)	-	(D)
LIFO reserve -----do--	134.7	(D)	(D)	(D)	-	(D)
LIFO value -----do--	118.3	90.4	(D)	(D)	-	(D)
Not subject to LIFO costing -----do--	1 952.8	1 486.0	99.8	111.7	29.6	225.6
Valuation method not reported <sup>2</sup> -----do--	648.7	(D)	11.7	(D)	39.3	(D)
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> -----do--	78.5	35.5	41.9	.1	-	1.0

See footnotes at end of table.



Table 4a. Summary Statistics by Major Group and Industry: 1987—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Major group 13, Oil and gas extraction						
	Total	Industry 1311, Crude petroleum and natural gas	Industry 1321, Natural gas liquids	Industry 1381, Drilling oil and gas wells	Industry 1382, Oil and gas field exploration services	Industry 1389, Oil and gas field services, n.e.c.	
End-of-year inventories—Con. Detail by type of inventory: Mined or quarried products .....mil dol..	608.4	537.5	70.2	.1	-	.6	
Supplies, parts, fuels, etc. .... do..	2 324.7	1 644.8	87.2	148.0	68.9	375.8	
Item	Major group 14, Nonmetallic minerals, except fuels						
	Total	Industry 1411, Dimension stone	Industry 1422, Crushed and broken limestone	Industry 1423, Crushed and broken granite	Industry 1429, Crushed and broken stone, n.e.c.	Industry 1442, Construction sand and gravel	Industry 1446, Industrial sand
Establishments during year .....number..	5 775	149	1 335	238	429	2 559	191
With 0 to 19 employees ..... do..	4 321	130	879	109	303	2 188	126
With 20 to 99 employees ..... do..	1 297	18	421	122	115	357	61
With 100 employees or more ..... do..	157	1	35	7	11	14	4
All employees:							
Average for year .....1,000..	112.7	1.3	28.9	6.5	8.3	28.9	3.9
Payroll for year .....mil dol..	2 858.0	24.5	702.3	168.6	210.9	673.0	98.9
Production, development, and exploration workers:							
Average for year .....1,000..	82.5	1.1	21.6	5.0	6.2	21.1	2.8
March ..... do..	77.8	1.0	19.8	4.8	5.8	19.2	2.6
May ..... do..	84.0	1.1	22.2	5.1	6.2	21.6	2.8
August ..... do..	85.4	1.1	22.5	5.2	6.4	22.3	2.8
November ..... do..	82.5	1.1	21.7	5.0	6.2	21.1	2.7
Hours ..... millions..	177.9	2.0	47.0	11.7	13.7	45.4	5.7
January to March ..... do..	39.7	.4	9.9	2.6	3.0	9.7	1.3
April to June ..... do..	45.8	.5	12.3	3.0	3.5	11.8	1.5
July to September ..... do..	47.3	.5	12.9	3.1	3.7	12.4	1.5
October to December ..... do..	45.0	.5	12.0	3.0	3.5	11.4	1.4
Wages .....mil dol..	1 956.4	17.7	482.9	120.4	150.5	489.3	61.5
Supplemental labor costs not included in payroll ..... do..	639.3	5.4	148.7	33.1	46.3	150.9	23.4
Legally required expenditures, including Social Security contributions ..... do..	281.8	2.6	72.1	15.5	22.6	72.8	10.0
Payments for voluntary programs ..... do..	357.5	2.9	76.6	17.6	23.7	78.1	13.3
Value added by mining ..... do..	9 232.9	64.7	2 091.4	696.2	677.8	2 011.6	308.3
Cost of supplies ..... do..	4 698.0	25.2	1 161.8	339.2	322.3	899.3	157.4
Supplies used, minerals received, and purchased machinery installed ..... do..	2 887.1	14.4	774.0	245.3	216.1	555.2	83.0
Resales ..... do..	81.7	.8	31.8	2.2	3.6	25.9	2.2
Purchased fuels consumed ..... do..	715.6	3.8	130.5	21.5	40.8	127.7	29.5
Purchased electric energy:							
Quantity .....mil kWh..	12 295.4	51.9	2 381.1	467.6	642.2	2 338.3	581.1
Cost .....mil dol..	604.8	2.7	135.3	30.2	36.6	124.5	31.0
Electric energy generated less sold .....mil kWh..	(D)	-	16.4	(D)	1.6	8.3	(D)
Contract work .....mil dol..	408.9	3.5	90.2	40.1	25.2	66.0	11.6
Cost of purchased communication services ..... do..	18.9	.1	5.2	1.1	.9	2.8	1.1
Value of shipments and receipts ..... do..	12 794.5	85.8	2 914.4	922.7	931.0	2 696.8	442.1
Value of resales ..... do..	97.3	1.1	34.0	2.3	4.2	30.8	2.8
Beginning-of-year inventories ..... do..	1 813.8	12.9	402.6	83.8	91.9	327.2	49.5
Detail by method of valuation:							
Subject to LIFO costing <sup>1</sup> .....mil dol..	305.9	(D)	67.8	(D)	(D)	9.6	2.6
LIFO reserve ..... do..	62.8	(D)	12.0	(D)	(D)	2.9	.6
LIFO value ..... do..	243.1	(D)	55.9	(D)	(D)	6.6	2.0
Not subject to LIFO costing ..... do..	932.5	(D)	207.0	46.7	35.2	108.7	36.1
Valuation method not reported <sup>2</sup> ..... do..	526.9	9.5	116.9	(D)	(D)	203.4	10.0
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> ..... do..	48.6	-	10.8	1.4	1.0	5.6	.8
Detail by type of inventory:							
Mined or quarried products .....mil dol..	1 410.5	11.2	333.4	74.2	71.7	279.6	27.8
Supplies, parts, fuels, etc. .... do..	403.3	1.7	69.3	9.6	20.2	47.6	21.8
End-of-year inventories ..... do..	1 762.1	14.1	417.5	75.0	94.2	348.5	45.6
Detail by method of valuation:							
Subject to LIFO costing <sup>1</sup> ..... do..	295.7	(D)	69.1	(D)	(D)	9.7	2.0
LIFO reserve ..... do..	56.0	(D)	13.1	(D)	(D)	2.8	.5
LIFO value ..... do..	239.6	(D)	56.0	(D)	(D)	6.8	1.6
Not subject to LIFO costing ..... do..	868.6	(D)	215.9	40.0	35.8	120.6	32.9
Valuation method not reported <sup>2</sup> ..... do..	546.8	9.7	122.1	(D)	(D)	210.7	10.2
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> ..... do..	51.1	-	10.4	1.5	.9	7.5	.5
Detail by type of inventory:							
Mined or quarried products .....mil dol..	1 351.4	12.5	346.6	65.2	73.5	298.7	24.0
Supplies, parts, fuels, etc. .... do..	410.7	1.6	70.9	9.8	20.7	49.7	21.6
Item	Major group 14, Nonmetallic minerals, except fuels—Con.						
	Industry 1455, Kaolin and ball clay	Industry 1459, Clay, ceramic, and refractory minerals, n.e.c.	Industry 1474, Potash, soda, and borate minerals	Industry 1475, Phosphate rock	Industry 1479, Chemical and fertilizer mineral mining, n.e.c.	Industry 1481, Nonmetallic minerals services, except fuels	Industry 1499, Miscellaneous nonmetallic minerals, except fuels
Establishments during year .....number..	45	152	30	39	79	177	352
With 0 to 19 employees ..... do..	9	88	11	13	45	154	266
With 20 to 99 employees ..... do..	20	54	5	11	19	22	72
With 100 employees or more ..... do..	16	10	14	15	15	1	14
All employees:							
Average for year .....1,000..	5.3	4.6	6.9	5.3	4.2	1.8	7.0
Payroll for year .....mil dol..	169.5	102.7	234.5	139.5	126.7	44.9	161.9

Table 4a. **Summary Statistics by Major Group and Industry: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Major group 14, Nonmetallic minerals, except fuels—Con.						
	Industry 1455, Kaolin and ball clay	Industry 1459, Clay, ceramic, and refractory minerals, n.e.c.	Industry 1474, Potash, soda, and borate minerals	Industry 1475, Phosphate rock	Industry 1479, Chemical and fertilizer mineral mining, n.e.c.	Industry 1481, Nonmetallic minerals services, except fuels	Industry 1499, Miscellaneous nonmetallic minerals, except fuels
Production, development, and exploration workers:							
Average for year .....1,000..	3.5	3.5	5.3	3.9	2.5	1.3	4.8
March .....do..	3.5	3.5	5.3	3.7	2.5	1.2	4.8
May .....do..	3.5	3.5	5.3	3.9	2.5	1.3	4.9
August .....do..	3.6	3.5	5.3	3.9	2.5	1.4	4.8
November .....do..	3.5	3.5	5.2	3.9	2.5	1.3	4.7
Hours .....millions..	7.9	7.4	11.4	7.7	5.3	2.8	9.8
January to March .....do..	1.9	1.8	2.8	1.9	1.4	.6	2.4
April to June .....do..	2.0	1.8	2.9	1.9	1.3	.7	2.5
July to September .....do..	1.9	1.9	2.9	2.0	1.3	.8	2.5
October to December .....do..	2.0	1.9	2.9	1.9	1.4	.8	2.4
Wages .....mil dol..	95.8	69.5	177.0	92.5	66.4	31.9	101.1
Supplemental labor costs not included in payroll .....do..	40.3	21.1	61.6	33.8	28.5	9.0	37.2
Legally required expenditures, including Social Security contributions .....do..	11.4	9.5	21.6	13.6	10.6	5.0	14.4
Payments for voluntary programs .....do..	28.8	11.6	40.0	20.1	17.9	4.0	22.8
Value added by mining .....do..	498.6	328.6	915.0	595.1	488.7	119.0	438.0
Cost of supplies .....do..	328.9	203.9	439.1	365.9	159.6	71.8	223.7
Supplies used, minerals received, and purchased machinery installed .....do..	192.3	121.3	212.0	202.1	90.2	46.7	134.7
Resales .....do..	(D)	(D)	(D)	—	(D)	2.2	6.1
Purchased fuels consumed .....do..	51.1	45.2	149.0	23.1	41.7	12.9	38.8
Purchased electric energy:							
Quantity .....mil kWh..	963.2	396.4	1 114.2	2 585.1	220.8	29.5	523.9
Cost .....mil dol..	40.8	20.0	50.2	90.4	12.4	1.4	29.0
Electric energy generated less sold .....mil kWh..	(D)	—	789.2	—	(D)	(D)	(D)
Contract work .....mil dol..	(D)	(D)	(D)	50.3	(D)	8.7	15.1
Cost of purchased communication services .....do..	1.3	1.0	1.8	1.6	.7	.2	1.1
Value of shipments and receipts .....do..	750.5	498.1	1 271.8	886.7	613.4	165.4	615.7
Value of resales .....do..	(D)	(D)	(D)	—	(D)	3.9	8.6
Beginning-of-year inventories .....do..	72.6	83.5	194.5	275.1	110.9	10.1	99.1
Detail by method of valuation:							
Subject to LIFO costing <sup>1</sup> .....mil dol..	(D)	7.3	(D)	68.3	43.5	—	18.0
LIFO reserve .....do..	(D)	2.7	(D)	7.9	5.3	—	6.9
LIFO value .....do..	(D)	4.6	(D)	60.3	38.1	—	11.1
Not subject to LIFO costing .....do..	(D)	51.2	113.2	195.7	35.4	4.4	46.0
Valuation method not reported <sup>2</sup> .....do..	2.9	20.9	(D)	.3	31.8	5.6	32.5
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> .....do..	—	4.1	11.0	10.9	.3	.1	2.6
Detail by type of inventory:							
Mined or quarried products .....mil dol..	45.8	60.0	115.9	225.2	92.2	2.4	71.1
Supplies, parts, fuels, etc. ....do..	26.8	23.5	78.7	49.9	18.7	7.6	28.0
End-of-year inventories .....do..	73.9	85.4	171.0	225.2	99.7	10.3	101.6
Detail by method of valuation:							
Subject to LIFO costing <sup>1</sup> .....do..	(D)	10.6	(D)	75.8	29.6	—	15.9
LIFO reserve .....do..	(D)	2.5	(D)	10.0	4.8	—	5.9
LIFO value .....do..	(D)	8.1	(D)	65.7	24.7	—	10.0
Not subject to LIFO costing .....do..	(D)	50.3	93.5	135.3	37.3	4.7	48.1
Valuation method not reported <sup>2</sup> .....do..	2.8	20.7	(D)	2.0	32.5	5.6	34.6
Amount subject to LIFO reported without associated reserve and value <sup>3</sup> .....do..	—	3.8	10.9	12.2	.3	.1	3.1
Detail by type of inventory:							
Mined or quarried products .....mil dol..	47.3	59.8	92.4	174.4	82.7	2.4	71.9
Supplies, parts, fuels, etc. ....do..	26.6	25.7	78.6	50.8	17.0	8.0	29.7

<sup>1</sup>Only includes data reported by respondents who (a) indicated amount of inventories subject to LIFO cost, and (b) provided sufficient information to determine associated LIFO reserve and value figures.<sup>2</sup>Includes data estimated for nonresponse and nonmail administrative records and data reported by respondents who provided total inventory figures without other information.<sup>3</sup>Includes data reported by respondents who indicated their inventories were subject to LIFO cost but did not provide associated LIFO reserve and value figures.Table 4b. **Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments by Industry Group and Industry: 1987**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Major group 10, Metal mining					
	All mineral industries	Total	Industry 1011, Iron ores	Industry 1021, Copper ores	Industry 1031, Lead and zinc ores	Industry 1041, Gold ores
Gross book value of depreciable assets (usually original cost) at beginning of year <sup>1</sup> .....	82 879.4	13 153.0	4 180.8	2 798.6	406.2	2 272.4
Building and other structures, except land <sup>2</sup> .....	9 082.0	2 496.3	1 282.2	469.5	73.1	284.9
Machinery and equipment <sup>2</sup> .....	63 237.5	8 324.3	2 815.7	1 942.9	191.9	1 300.2
Mineral exploration and development <sup>3</sup> .....	4 923.3	1 662.0	(D)	298.9	57.0	508.4
Mineral land and rights <sup>3</sup> .....	5 636.5	670.4	(D)	87.3	84.3	178.9
Capital expenditures during year (except land and mineral rights) .....	15 418.2	899.1	24.0	205.0	11.9	542.6
New capital expenditures during year .....	7 349.2	632.8	(D)	170.8	(D)	361.5
Buildings and other structures, except land .....	939.2	78.4	(D)	.6	(D)	63.9
Machinery and equipment .....	6 410.0	554.4	21.4	170.2	(D)	297.5
Used capital expenditures during year .....	1 120.1	58.3	.8	19.5	(D)	18.1
Buildings and other structures, except land .....	105.6	8.4	—	.2	(D)	1.4
Machinery and equipment .....	1 014.6	49.9	.8	19.3	(D)	16.7
Mineral exploration and development <sup>4</sup> .....	6 948.9	208.1	(D)	14.7	1.6	163.0



**Table 4b. Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments by Industry Group and Industry: 1987—Con.**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	All mineral industries	Major group 10, Metal mining				
		Total	Industry 1011, Iron ores	Industry 1021, Copper ores	Industry 1031, Lead and zinc ores	Industry 1041, Gold ores
Capitalized mineral land and rights <sup>3</sup> .....	279.2	51.6	(D)	1.6	1.7	46.4
Deductions from depreciable assets during year <sup>1</sup> .....	3 742.2	434.0	(D)	35.5	3.6	61.5
Buildings and other structures, except land <sup>2</sup> .....	205.5	32.6	(D)	2.5	(Z)	2.9
Machinery and equipment <sup>2</sup> .....	3 126.1	233.5	42.7	31.2	3.1	36.1
Mineral exploration and development <sup>3</sup> .....	290.3	148.1	.1	1.2	.3	19.2
Mineral land and rights <sup>3</sup> .....	120.3	19.8	.1	.5	.2	3.3
Depreciation and depletion charges for year <sup>1</sup> .....	5 491.1	729.5	138.3	111.1	26.0	238.2
Buildings and other structures, except land <sup>2</sup> .....	496.0	105.2	32.4	16.7	4.9	35.5
Machinery and equipment <sup>2</sup> .....	4 418.2	441.4	101.7	86.2	10.0	116.6
Mineral exploration and development <sup>3</sup> .....	308.8	128.0	(D)	6.3	4.0	70.1
Mineral land and rights <sup>3</sup> .....	267.8	54.8	(D)	1.9	7.0	16.0
Gross book value of depreciable assets at end of year <sup>1</sup> .....	84 285.5	13 669.7	4 162.2	2 969.7	416.3	2 799.9
Buildings and other structures, except land <sup>2</sup> .....	9 313.6	2 550.3	1 282.9	467.8	74.0	347.3
Machinery and equipment <sup>2</sup> .....	64 142.5	8 695.2	2 795.2	2 101.2	198.1	1 578.3
Mineral exploration and development <sup>3</sup> .....	5 034.1	1 721.9	(D)	312.3	58.3	652.2
Mineral land and rights <sup>3</sup> .....	5 795.4	702.2	(D)	88.4	85.9	222.1
Rental payments during year .....	1 553.7	36.7	3.8	7.6	.5	11.1
Buildings and other structures, except land .....	417.7	6.1	(D)	.5	(Z)	1.7
Machinery and equipment .....	1 136.1	30.6	(D)	7.1	.5	9.5
Lease rents .....	229.8	27.3	(D)	.3	(D)	9.5
Expensed mineral exploration, development, land, and rights <sup>4</sup> .....	5 724.6	102.4	(D)	1.8	(D)	55.5
Mineral exploration and development .....	5 215.6	67.9	16.0	1.7	1.9	38.6
Mineral land and rights .....	509.0	34.5	(D)	.2	(D)	16.9

  

Item	Major group 10, Metal mining—Con.				
	Industry 1044, Silver ores	Industry 1061, Ferroalloy ores, except vanadium	Industry 1081, Metal mining services	Industry 1094, Uranium-radium-vanadium ores	Industry 1099, Miscellaneous metal ores, n.e.c.
Gross book value of depreciable assets (usually original cost) at beginning of year <sup>1</sup> .....	362.3	1 341.4	131.6	1 372.2	287.5
Buildings and other structures, except land <sup>2</sup> .....	42.4	124.2	8.2	178.8	32.9
Machinery and equipment <sup>2</sup> .....	229.3	925.5	123.3	603.8	191.7
Mineral exploration and development <sup>3</sup> .....	73.0	179.5	—	449.8	(D)
Mineral land and rights <sup>3</sup> .....	17.5	112.3	—	139.9	(D)
Capital expenditures during year (except land and mineral rights) .....	12.2	7.5	25.7	39.0	31.3
New capital expenditures during year .....	(D)	2.4	21.5	11.5	23.0
Buildings and other structures, except land .....	(D)	.2	9	3.2	5.3
Machinery and equipment .....	(D)	2.2	20.6	8.3	17.6
Used capital expenditures during year .....	(D)	(Z)	4.2	8.8	(D)
Buildings and other structures, except land .....	(D)	—	.5	4.5	(D)
Machinery and equipment .....	(D)	(Z)	3.7	4.2	2.9
Mineral exploration and development <sup>4</sup> .....	.9	5.1	—	18.7	(D)
Capitalized mineral land and rights <sup>3</sup> .....	(Z)	(Z)	—	(D)	(Z)
Deductions from depreciable assets during year <sup>1</sup> .....	5.8	42.2	9.9	(D)	2.8
Buildings and other structures, except land <sup>2</sup> .....	.1	1.3	.3	24.7	(D)
Machinery and equipment <sup>2</sup> .....	4.9	28.6	9.7	75.1	2.0
Mineral exploration and development <sup>3</sup> .....	.6	12.2	—	114.2	.3
Mineral land and rights <sup>3</sup> .....	.1	.1	—	(D)	(D)
Depreciation and depletion charges for year <sup>1</sup> .....	25.0	25.7	13.3	134.5	17.4
Buildings and other structures, except land <sup>2</sup> .....	3.3	1.8	.5	8.7	1.3
Machinery and equipment <sup>2</sup> .....	17.6	21.9	12.8	60.3	14.3
Mineral exploration and development <sup>3</sup> .....	3.5	1.0	—	39.9	(D)
Mineral land and rights <sup>3</sup> .....	.6	1.0	—	25.6	(D)
Gross book value of depreciable assets at end of year <sup>1</sup> .....	368.7	1 306.7	147.4	1 182.8	316.0
Buildings and other structures, except land <sup>2</sup> .....	44.0	123.1	9.4	161.8	39.9
Machinery and equipment <sup>2</sup> .....	233.9	899.0	137.9	541.2	210.3
Mineral exploration and development <sup>3</sup> .....	73.3	172.4	—	354.3	(D)
Mineral land and rights <sup>3</sup> .....	17.5	112.2	—	125.4	(D)
Rental payments during year .....	3.4	.2	6.4	1.0	2.6
Buildings and other structures, except land .....	2.9	(Z)	.6	.1	(D)
Machinery and equipment .....	.4	.2	5.8	1.0	(D)
Lease rents .....	(Z)	—	—	(D)	(D)
Expensed mineral exploration, development, land, and rights <sup>4</sup> .....	—	.2	(D)	(D)	(D)
Mineral exploration and development .....	—	(D)	(D)	(D)	(D)
Mineral land and rights .....	—	(D)	(Z)	.5	(D)

  

Item	Major group 12, Bituminous coal and lignite mining			
	Total	Industry 1221, Bituminous coal and lignite surface mining	Industry 1222, Bituminous coal underground mining	Industry 1241, Coal mining services
Gross book value of depreciable assets (usually original cost) at beginning of year <sup>1</sup> .....	25 856.7	12 660.3	12 751.9	190.1
Buildings and other structures, except land <sup>2</sup> .....	3 692.4	1 538.4	2 128.6	12.6
Machinery and equipment <sup>2</sup> .....	16 690.6	8 834.2	7 470.6	144.3
Mineral exploration and development <sup>3</sup> .....	2 508.7	738.7	1 750.3	19.8
Mineral land and rights <sup>3</sup> .....	2 964.9	1 549.0	1 402.4	13.5
Capital expenditures during year (except land and mineral rights) .....	1 665.2	736.4	877.7	12.1
New capital expenditures during year .....	1 092.9	511.4	562.4	5.3
Buildings and other structures, except land .....	136.5	80.8	53.6	(D)
Machinery and equipment .....	956.4	430.6	508.8	(D)
Used capital expenditures during year .....	409.1	144.9	234.9	4.1
Buildings and other structures, except land .....	57.2	9.9	46.8	(D)
Machinery and equipment .....	351.9	134.9	188.1	(D)
Mineral exploration and development <sup>4</sup> .....	163.2	80.1	80.4	2.7

**Table 4b. Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments by Industry Group and Industry: 1987—Con.**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Major group 12, Bituminous coal and lignite mining						
		Industry 1221, Bituminous coal and lignite surface mining	Industry 1222, Bituminous coal underground mining	Industry 1231, Anthracite mining	Industry 1241, Coal mining services		
	Total						
Capitalized mineral land and rights <sup>3</sup> -----	151.4	121.8	29.1	.5	-		
Deductions from depreciable assets during year <sup>1</sup> -----	1 254.8	667.3	569.9	6.2	11.4		
Buildings and other structures, except land <sup>2</sup> -----	73.5	48.8	24.0	.4	.3		
Machinery and equipment <sup>2</sup> -----	1 009.3	529.4	464.2	4.6	11.2		
Mineral exploration and development <sup>3</sup> -----	123.3	50.3	72.3	.6	-		
Mineral land and rights <sup>3</sup> -----	48.7	38.7	9.4	.6	-		
Depreciation and depletion charges for year <sup>1</sup> -----	1 791.4	849.9	884.8	30.4	26.3		
Buildings and other structures, except land <sup>2</sup> -----	183.2	71.9	109.2	.9	1.2		
Machinery and equipment <sup>2</sup> -----	1 333.6	647.1	646.9	14.5	25.1		
Mineral exploration and development <sup>3</sup> -----	145.4	50.2	87.6	7.5	-		
Mineral land and rights <sup>3</sup> -----	129.2	80.6	41.1	7.5	-		
Gross book value of depreciable assets at end of year <sup>1</sup> -----	26 418.4	12 851.3	13 088.7	196.5	281.9		
Buildings and other structures, except land <sup>2</sup> -----	3 812.6	1 580.3	2 205.0	12.9	14.3		
Machinery and equipment <sup>2</sup> -----	16 989.6	8 870.4	7 703.3	148.3	267.6		
Mineral exploration and development <sup>3</sup> -----	2 548.7	768.5	1 758.3	21.8	-		
Mineral land and rights <sup>3</sup> -----	3 067.6	1 632.1	1 422.1	13.4	-		
Rental payments during year -----	349.9	206.4	131.9	4.1	7.6		
Buildings and other structures, except land -----	39.6	31.4	7.6	.1	.4		
Machinery and equipment -----	310.3	175.0	124.2	4.0	7.2		
Lease rents -----	180.2	103.4	76.4	.4	-		
Expensed mineral exploration, development, land, and rights <sup>4</sup> -----	620.1	400.0	218.3	1.8	-		
Mineral exploration and development -----	244.3	177.7	65.4	1.3	-		
Mineral land and rights -----	375.7	222.3	152.9	.5	-		
Item	Major group 13, Oil and gas extraction						
		Industry 1311, Crude petroleum and natural gas	Industry 1321, Natural gas liquids	Industry 1381, Drilling oil and gas wells	Industry 1382, Oil and gas field exploration services	Industry 1389, Oil and gas field services, n.e.c.	
	Total						
Gross book value of depreciable assets (usually original cost) at beginning of year <sup>1</sup> -----	27 661.1	(NA)	8 015.9	12 015.4	899.5	6 730.3	
Building and other structures, except land <sup>2</sup> -----	1 344.0	(NA)	343.9	204.6	79.2	716.3	
Machinery and equipment <sup>2</sup> -----	26 317.2	(NA)	7 672.0	11 810.8	820.3	6 014.1	
Mineral exploration and development <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Mineral land and rights <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Capital expenditures during year (except land and mineral rights) -----	11 717.4	10 549.0	382.7	321.0	69.3	395.4	
New capital expenditures during year -----	4 710.9	3 766.0	358.4	198.5	48.2	339.8	
Buildings and other structures, except land -----	662.7	589.9	12.2	10.9	2.6	47.1	
Machinery and equipment -----	4 048.1	3 176.1	346.2	187.5	45.6	292.7	
Used capital expenditures during year -----	458.7	235.2	24.3	122.5	21.0	55.6	
Buildings and other structures, except land -----	32.5	17.7	.3	2.7	.2	11.7	
Machinery and equipment -----	426.2	217.5	24.1	119.9	20.8	43.9	
Mineral exploration and development <sup>4</sup> -----	6 547.9	6 547.9	(NA)	(NA)	(NA)	(NA)	
Capitalized mineral land and rights <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Deductions from depreciable assets during year <sup>1</sup> -----	1 498.9	(NA)	225.2	547.7	103.4	622.5	
Buildings and other structures, except land <sup>2</sup> -----	70.3	(NA)	12.1	13.6	2.2	42.4	
Machinery and equipment <sup>2</sup> -----	1 428.6	(NA)	213.1	534.2	101.2	580.1	
Mineral exploration and development <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Mineral land and rights <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Depreciation and depletion charges for year <sup>1</sup> -----	1 895.5	(NA)	418.8	827.0	82.7	567.1	
Buildings and other structures, except land <sup>2</sup> -----	94.4	(NA)	23.5	17.5	4.0	49.3	
Machinery and equipment <sup>2</sup> -----	1 801.1	(NA)	395.2	809.5	78.6	517.8	
Mineral exploration and development <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Mineral land and rights <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Gross book value of depreciable assets at end of year <sup>1</sup> -----	27 330.7	(NA)	8 173.4	11 788.6	865.4	6 503.2	
Buildings and other structures, except land <sup>2</sup> -----	1 361.3	(NA)	344.2	204.6	79.8	732.6	
Machinery and equipment <sup>2</sup> -----	25 969.3	(NA)	7 829.2	11 584.0	785.6	5 770.6	
Mineral exploration and development <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Mineral land and rights <sup>3</sup> -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Rental payments during year -----	1 016.5	679.3	31.1	75.3	88.3	142.5	
Buildings and other structures, except land -----	361.8	279.9	2.7	17.1	12.9	49.3	
Machinery and equipment -----	654.8	399.5	28.4	58.2	75.4	93.2	
Lease rents -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Expensed mineral exploration, development, land, and rights <sup>4</sup> -----	4 804.5	4 804.5	(NA)	(NA)	(NA)	(NA)	
Mineral exploration and development -----	4 804.5	4 804.5	(NA)	(NA)	(NA)	(NA)	
Mineral land and rights -----	-	(NA)	(NA)	(NA)	(NA)	(NA)	
Item	Major group 14, Nonmetallic minerals, except fuels						
		Industry 1411, Dimension stone	Industry 1422, Crushed and broken limestone	Industry 1423, Crushed and broken granite	Industry 1429, Crushed and broken stone, n.e.c.	Industry 1442, Construction sand and gravel	Industry 1446, Industrial sand
	Total						
Gross book value of depreciable assets (usually original cost) at beginning of year <sup>1</sup> -----	16 208.6	56.2	3 264.8	841.4	767.0	2 886.6	539.4
Building and other structures, except land <sup>2</sup> -----	1 549.3	6.3	228.3	36.5	96.9	173.2	86.0
Machinery and equipment <sup>2</sup> -----	11 905.4	33.6	2 717.5	745.6	621.6	2 321.2	380.4
Mineral exploration and development <sup>3</sup> -----	752.6	4.5	28.3	3.4	3.2	31.9	(D)
Mineral land and rights <sup>3</sup> -----	2 001.3	11.8	290.7	55.9	45.2	360.2	(D)
Capital expenditures during year (except land and mineral rights) -----	1 136.4	4.0	338.7	112.7	69.2	214.1	23.5
New capital expenditures during year -----	912.6	2.7	260.5	94.2	58.8	149.6	20.3
Buildings and other structures, except land -----	61.6	.4	14.3	4.5	4.2	14.2	(D)
Machinery and equipment -----	851.0	2.3	246.2	89.7	54.5	135.4	(D)
Used capital expenditures during year -----	194.1	1.2	74.1	17.2	10.1	57.5	(D)
Buildings and other structures, except land -----	7.5	(Z)	1.5	.2	.4	2.9	(D)
Machinery and equipment -----	186.6	1.1	72.6	17.1	9.7	54.6	(D)



**Table 4b. Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments by Industry Group and Industry: 1987—Con.**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Major group 14, Nonmetallic minerals, except fuels						
	Total	Industry 1411, Dimension stone	Industry 1422, Crushed and broken limestone	Industry 1423, Crushed and broken granite	Industry 1429, Crushed and broken stone, n.e.c.	Industry 1442, Construction sand and gravel	Industry 1446, Industrial sand
Capital expenditures during year (except land and mineral rights)—Con.							
Mineral exploration and development <sup>1</sup> .....	29.7	.2	4.1	1.3	.3	7.0	(D)
Capitalized mineral land and rights <sup>3</sup> .....	76.2	.9	18.4	3.4	2.2	26.5	(D)
Deductions from depreciable assets during year <sup>1</sup> .....	554.5	3.5	171.4	35.2	53.3	140.3	(D)
Buildings and other structures, except land <sup>2</sup> .....	29.1	.4	5.5	.4	3.8	8.4	1.0
Machinery and equipment <sup>2</sup> .....	454.7	2.2	151.4	32.6	38.7	112.4	15.7
Mineral exploration and development <sup>3</sup> .....	18.9	.2	1.6	.1	.3	4.5	(D)
Mineral land and rights <sup>3</sup> .....	51.8	.8	12.9	2.0	10.5	15.1	1.5
Depreciation and depletion charges for year <sup>1</sup> .....	1 074.7	4.2	273.7	81.2	73.1	202.2	42.9
Buildings and other structures, except land <sup>2</sup> .....	113.2	.4	37.5	2.8	8.0	12.9	6.7
Machinery and equipment <sup>2</sup> .....	842.1	3.0	223.0	74.9	63.5	165.3	31.1
Mineral exploration and development <sup>3</sup> .....	35.4	.2	2.0	.5	.1	2.1	(D)
Mineral land and rights <sup>3</sup> .....	83.8	.6	11.1	2.9	1.4	21.7	(D)
Gross book value of depreciable assets at end of year <sup>1</sup> .....	16 866.8	57.6	3 450.5	922.3	785.1	2 986.9	550.1
Buildings and other structures, except land <sup>2</sup> .....	1 589.3	6.4	238.6	40.7	97.8	181.8	87.1
Machinery and equipment <sup>2</sup> .....	12 488.4	34.8	2 884.9	819.7	647.1	2 398.8	384.5
Mineral exploration and development <sup>3</sup> .....	763.5	4.5	30.7	4.6	3.2	34.5	(D)
Mineral land and rights <sup>3</sup> .....	2 025.6	11.9	296.2	57.3	37.0	371.7	(D)
Rental payments during year .....	150.6	.8	29.1	9.1	14.5	54.4	3.3
Buildings and other structures, except land .....	10.2	.1	2.0	.5	.8	4.7	.1
Machinery and equipment .....	140.4	.8	27.1	8.6	13.7	49.6	3.2
Lease rents .....	22.2	(D)	10.8	2.4	.8	3.4	.6
Expensed mineral exploration, development, land, and rights <sup>4</sup> .....	197.7	(Z)	50.4	7.8	18.8	52.3	7.4
Mineral exploration and development .....	98.9	—	38.9	1.8	9.5	18.3	1.2
Mineral land and rights .....	98.8	(Z)	11.5	6.0	9.3	34.1	6.1
Item	Major group 14, Nonmetallic minerals, except fuels—Con.						
	Industry 1455, Kaolin and ball clay	Industry 1459, Clay, ceramic, and refractory minerals, n.e.c.	Industry 1474, Potash, soda, and borate minerals	Industry 1475, Phosphate rock	Industry 1479, Chemical and fertilizer mineral mining, n.e.c.	Industry 1481, Nonmetallic minerals services, except fuels	Industry 1499, Miscellaneous nonmetallic minerals, except fuels
Gross book value of depreciable assets (usually original cost) at beginning of year <sup>1</sup> .....	717.0	490.3	2 604.6	2 466.2	746.9	128.6	699.5
Building and other structures, except land <sup>2</sup> .....	58.7	73.6	371.1	217.2	101.8	9.5	90.1
Machinery and equipment <sup>2</sup> .....	554.5	370.5	1 636.2	1 414.2	470.0	119.2	521.0
Mineral exploration and development <sup>3</sup> .....	3.4	1.9	496.8	(D)	(D)	—	16.5
Mineral land and rights <sup>3</sup> .....	100.4	44.4	100.4	(D)	(D)	—	71.9
Capital expenditures during year (except land and mineral rights) .....	77.0	34.4	82.3	74.3	34.9	25.4	46.0
New capital expenditures during year .....	76.0	25.5	71.4	(D)	(D)	18.5	35.3
Buildings and other structures, except land .....	5.2	3.3	(D)	(D)	(D)	(D)	3.2
Machinery and equipment .....	70.8	22.1	(D)	(D)	(D)	(D)	32.0
Used capital expenditures during year .....	(D)	(D)	(D)	(D)	(D)	6.9	6.6
Buildings and other structures, except land .....	(D)	(D)	(D)	(D)	(D)	—	.3
Machinery and equipment .....	.4	7.2	(D)	(D)	(D)	(D)	6.3
Mineral exploration and development <sup>4</sup> .....	(D)	(D)	(D)	(D)	(Z)	—	4.1
Capitalized mineral land and rights <sup>3</sup> .....	6.2	4.8	(D)	(D)	(Z)	—	1.5
Deductions from depreciable assets during year <sup>1</sup> .....	13.5	26.8	(D)	(D)	21.1	9.5	20.9
Buildings and other structures, except land <sup>2</sup> .....	(D)	(D)	(D)	(D)	(D)	.6	1.3
Machinery and equipment <sup>2</sup> .....	12.3	17.2	(D)	21.2	(D)	8.9	16.1
Mineral exploration and development <sup>3</sup> .....	(D)	(D)	(D)	(D)	(D)	—	1.3
Mineral land and rights <sup>3</sup> .....	(Z)	6.2	(D)	(D)	(D)	—	2.2
Depreciation and depletion charges for year <sup>1</sup> .....	41.3	37.1	124.0	91.0	45.8	13.2	45.1
Buildings and other structures, except land <sup>2</sup> .....	4.4	4.2	11.2	13.2	5.6	.7	5.6
Machinery and equipment <sup>2</sup> .....	33.4	31.6	74.4	61.7	33.1	12.5	34.6
Mineral exploration and development <sup>3</sup> .....	.3	.1	(D)	(D)	(D)	—	.6
Mineral land and rights <sup>3</sup> .....	3.2	1.2	(D)	(D)	(D)	(Z)	4.3
Gross book value of depreciable assets at end of year <sup>1</sup> .....	786.7	502.7	2 669.3	2 524.2	760.7	144.6	726.2
Buildings and other structures, except land <sup>2</sup> .....	63.4	75.1	374.7	219.4	102.8	9.2	92.3
Machinery and equipment <sup>2</sup> .....	613.3	382.6	1 687.9	1 464.6	491.4	135.4	543.3
Mineral exploration and development <sup>3</sup> .....	3.5	2.1	505.4	34.7	(D)	—	19.4
Mineral land and rights <sup>3</sup> .....	106.6	42.9	101.2	805.6	(D)	—	71.2
Rental payments during year .....	2.1	1.0	9.8	7.8	6.4	4.4	8.0
Buildings and other structures, except land .....	.2	.2	(Z)	(D)	(D)	.4	1.1
Machinery and equipment .....	2.0	.8	9.8	(D)	(D)	4.0	6.9
Lease rents .....	1.7	.7	.2	.2	(D)	—	1.1
Expensed mineral exploration, development, land, and rights <sup>4</sup> .....	11.0	11.9	(D)	20.3	(D)	—	5.0
Mineral exploration and development .....	7.0	10.8	(D)	(D)	(D)	—	3.7
Mineral land and rights .....	4.0	1.1	(D)	(D)	(D)	—	1.3

<sup>1</sup>Excludes data for crude petroleum and natural gas industry. Data for mineral exploration and development, and mineral land and rights portions are excluded for mining service industries and natural gas liquids industry.

<sup>2</sup>Excludes data for crude petroleum and natural gas industry.

<sup>3</sup>Excludes data for mining service industries and oil and gas extraction industries.

<sup>4</sup>Excludes data for mining service industries and natural gas liquids industry.

**Table 5. Industry Shipments and Receipts and Net Shipments of Primary Products by Industry: 1987**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry	Value of shipments and receipts					Value of net shipments of primary products or services		
		Total	Primary products	Secondary products	Receipts for secondary services	Products purchased and resold without further processing	Total produced or performed in all industries	Produced or performed in this industry	Produced or performed in other industries
<b>10</b>	<b>METAL MINING</b>								
1011	Iron ores .....	1 362.4	(D)	(D)	-	(Z)	<sup>1</sup> 360.5	(D)	(D)
1021	Copper ores .....	2 149.7	2 013.1	136.6	-	-	<sup>1</sup> 909.1	1 894.5	14.6
1031	Lead and zinc ores .....	268.3	(D)	(D)	-	-	(D)	(D)	(D)
1041	Gold ores .....	2 067.1	2 053.4	(D)	(D)	-	2 053.4	2 053.4	-
1044	Silver ores .....	193.8	193.8	-	-	-	(D)	(D)	(D)
1061	Ferroalloy ores, except vanadium .....	109.9	109.8	(D)	-	(D)	(D)	(D)	(D)
1081	Metal mining services .....	251.3	248.7	(D)	-	(D)	249.2	248.7	.5
1094	Uranium-radium-vanadium ores .....	251.5	251.4	(D)	(D)	-	<sup>2</sup> 226.4	<sup>2</sup> 226.4	-
1099	Miscellaneous metal ores, n.e.c. ....	197.5	195.2	-	(D)	(D)	(D)	(D)	(D)
<b>12</b>	<b>COAL MINING</b>								
1221	Bituminous coal and lignite surface mining .....	13 617.5	13 261.2	35.0	10.1	311.2	<sup>3</sup> 9 558.7	<sup>3</sup> 9 498.4	60.3
1222	Bituminous coal underground mining .....	11 729.3	11 571.3	(D)	(D)	93.5	<sup>3</sup> 10 362.6	<sup>3</sup> 10 342.5	20.1
1231	Anthracite mining .....	206.3	200.2	(D)	-	(D)	<sup>4</sup> 138.3	<sup>4</sup> 138.3	-
1241	Coal mining services .....	402.0	382.7	(D)	(D)	(D)	405.5	382.7	22.8
<b>13</b>	<b>OIL AND GAS EXTRACTION</b>								
1311	Crude petroleum and natural gas .....	76 518.1	76 210.6	16.2	260.0	31.3	76 285.3	76 210.6	74.7
1321	Natural gas liquids .....	24 749.5	(D)	143.6	(D)	-	<sup>5</sup> 5 488.1	(D)	(D)
1381	Drilling oil and gas wells .....	3 625.9	3 450.7	(D)	132.6	(D)	3 677.0	3 450.7	226.3
1382	Oil and gas field exploration services .....	1 096.2	1 093.1	(D)	2.3	(D)	1 105.3	1 093.1	12.2
1389	Oil and gas field services, n.e.c. ....	6 373.2	6 092.3	63.7	122.7	94.5	6 367.1	6 092.3	274.8
<b>14</b>	<b>NONMETALLIC MINERALS, EXCEPT FUELS</b>								
1411	Dimension stone .....	85.8	80.8	3.9	-	1.1	(D)	(D)	(D)
1422	Crushed and broken limestone .....	2 914.4	2 702.7	152.8	24.9	34.0	<sup>6</sup> 2 824.7	<sup>6</sup> 2 664.6	160.1
1423	Crushed and broken granite .....	922.7	899.0	20.6	.7	2.3	<sup>6</sup> 914.5	<sup>6</sup> 897.7	16.8
1429	Crushed and broken stone, n.e.c. ....	931.0	875.0	49.8	2.0	4.2	<sup>6</sup> 980.9	<sup>6</sup> 872.6	108.3
1442	Construction sand and gravel .....	2 696.8	2 544.0	88.5	33.5	30.8	<sup>2</sup> 946.7	<sup>2</sup> 500.6	446.1
1446	Industrial sand .....	442.1	398.8	(D)	(D)	2.8	<sup>4</sup> 408.1	<sup>4</sup> 395.1	13.0
1455	Kaolin and ball clay .....	750.5	746.7	(D)	-	(D)	732.2	729.6	2.6
1459	Clay, ceramic, and refractory minerals, n.e.c. ....	498.1	480.3	10.8	(D)	(D)	487.5	474.3	13.2
1474	Potash, soda, and borate minerals .....	1 271.8	1 265.1	(D)	-	(D)	(D)	(D)	-
1475	Phosphate rock .....	886.7	(D)	(D)	-	-	844.6	844.6	-
1479	Chemical and fertilizer mineral mining, n.e.c. ....	613.4	592.3	(D)	-	(D)	(D)	(D)	(D)
1481	Nonmetallic minerals services, except fuels .....	165.4	146.2	14.7	.6	3.9	214.5	146.2	68.3
1499	Miscellaneous nonmetallic minerals, except fuels .....	615.7	586.8	18.6	1.6	8.6	<sup>2</sup> 609.6	<sup>2</sup> 578.6	31.0

<sup>1</sup>Represents sum of direct-shipping ores, treated iron ores for consumption, and iron agglomerates.

<sup>2</sup>Represents gross shipments less minerals received for preparation.

<sup>3</sup>Represents gross shipments excluding coal not specified by kind and less coal received for preparation.

<sup>4</sup>Represents raw coal for use without preparation plus prepared coal.

<sup>5</sup>Represents net natural gas liquids only.

<sup>6</sup>Represents net shipments obtained by subtracting stone received for preparation from gross shipments.

**Table 6. Number of Mineral Establishments by Employment-Size Class, Industry Group, and Industry: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group and industry	Estab- lishments during year	Establishments during year with an average employment-size class of—										Estab- lishments during year covered by admin- istrative records
			0 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 or more	
<b>10</b>	<b>All industries .....</b>	<b>33 617</b>	<b>16 950</b>	<b>5 665</b>	<b>4 703</b>	<b>3 755</b>	<b>1 307</b>	<b>785</b>	<b>290</b>	<b>115</b>	<b>44</b>	<b>3</b>	<b>12 485</b>
<b>10</b>	<b>Metal mining .....</b>	<b>1 027</b>	<b>473</b>	<b>162</b>	<b>132</b>	<b>112</b>	<b>55</b>	<b>54</b>	<b>20</b>	<b>14</b>	<b>4</b>	<b>1</b>	<b>280</b>
101	Iron ores .....	51	17	9	9	5	1	1	2	5	2	-	22
1011	Iron ores .....	51	17	9	9	5	1	1	2	5	2	-	22
102	Copper ores .....	61	15	6	7	8	2	7	7	7	1	1	8
1021	Copper ores .....	61	15	6	7	8	2	7	7	7	1	1	8
103	Lead and zinc ores .....	39	10	4	6	5	6	7	1	-	-	-	6
1031	Lead and zinc ores .....	39	10	4	6	5	6	7	1	-	-	-	6
104	Gold and silver ores .....	372	173	53	45	41	24	26	8	1	1	-	133
1041	Gold ores .....	319	142	45	41	38	23	23	5	1	1	-	106
1044	Silver ores .....	53	31	8	4	3	1	3	3	-	-	-	27
106	Ferroalloy ores, except vanadium .....	58	41	7	3	1	3	1	1	1	-	-	36
1061	Ferroalloy ores, except vanadium .....	58	41	7	3	1	3	1	1	1	-	-	36
108	Metal mining services .....	268	157	41	28	30	10	2	-	-	-	-	31
1081	Metal mining services .....	268	157	41	28	30	10	2	-	-	-	-	31
109	Miscellaneous metal ores .....	178	60	42	34	22	9	10	1	-	-	-	44
1094	Uranium-radium-vanadium ores .....	101	24	30	20	14	7	6	-	-	-	-	22
1099	Miscellaneous metal ores, n.e.c. ....	77	36	12	14	8	2	4	1	-	-	-	22

See footnotes at end of table.



**Table 6. Number of Mineral Establishments by Employment-Size Class, Industry Group, and Industry: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group and industry	Estab- lishments during year	Establishments during year with an average employment-size class of—										Estab- lishments during year covered by admin- istrative records
			0 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 or more	
12	Coal mining .....	3 905	1 078	625	784	740	290	229	124	31	4	—	1 337
122	Bituminous coal and lignite mining .....	3 507	910	548	714	684	269	225	122	31	4	—	1 190
1221	Bituminous coal and lignite surface mining .....	1 804	557	320	315	304	153	109	38	7	1	—	712
1222	Bituminous coal underground mining .....	1 703	353	228	399	380	116	116	84	24	3	—	478
123	Anthracite mining .....	107	35	28	18	17	7	1	1	—	—	—	47
1231	Anthracite mining .....	107	35	28	18	17	7	1	1	—	—	—	47
124	Coal mining services .....	291	133	49	52	39	14	3	1	—	—	—	100
1241	Coal mining services .....	291	133	49	52	39	14	3	1	—	—	—	100
13	Oil and gas extraction .....	22 910	13 545	3 648	2 550	1 887	681	376	128	60	33	2	9 397
131	Crude petroleum and natural gas .....	10 203	6 678	1 493	861	599	237	176	85	46	26	2	4 509
1311	Crude petroleum and natural gas .....	10 203	6 678	1 493	861	599	237	176	85	46	26	2	4 509
132	Natural gas liquids .....	714	203	147	154	158	40	12	—	—	—	—	—
1321	Natural gas liquids .....	714	203	147	154	158	40	12	—	—	—	—	—
138	Oil and gas field services .....	11 993	6 664	2 008	1 535	1 130	404	188	43	14	7	—	4 888
1381	Drilling oil and gas wells .....	2 591	1 183	378	410	335	172	87	22	3	1	—	948
1382	Oil and gas field exploration services .....	1 917	1 423	226	125	77	44	16	3	2	1	—	948
1389	Oil and gas field services, n.e.c. ....	7 485	4 058	1 404	1 000	718	188	85	18	9	5	—	2 992
14	Nonmetallic minerals, except fuels .....	5 775	1 854	1 230	1 237	1 016	281	126	18	10	3	—	1 471
141	Dimension stone .....	149	76	38	16	15	3	1	—	—	—	—	60
1411	Dimension stone .....	149	76	38	16	15	3	1	—	—	—	—	60
142	Crushed and broken stone, including riprap .....	2 002	407	333	551	517	141	52	1	—	—	—	267
1422	Crushed and broken limestone .....	1 335	261	231	387	329	92	34	1	—	—	—	150
1423	Crushed and broken granite .....	238	26	21	62	100	22	7	—	—	—	—	22
1429	Crushed and broken stone, n.e.c. ....	429	120	81	102	88	27	11	—	—	—	—	95
144	Sand and gravel .....	2 750	1 059	717	538	341	77	17	—	1	—	—	939
1442	Construction sand and gravel .....	2 559	1 015	672	501	295	62	13	—	1	—	—	890
1446	Industrial sand .....	191	44	45	37	46	15	4	—	—	—	—	49
145	Clay, ceramic, and refractory minerals .....	197	50	22	25	49	25	19	5	2	—	—	35
1455	Kaolin and ball clay .....	45	5	—	4	14	6	9	5	2	—	—	1
1459	Clay, ceramic, and refractory minerals, n.e.c. ....	152	45	22	21	35	19	10	—	—	—	—	34
147	Chemical and fertilizer mineral mining .....	148	38	18	13	23	12	24	12	5	3	—	28
1474	Potash, soda, and borate minerals .....	30	3	5	3	4	1	4	5	3	2	—	2
1475	Phosphate rock .....	39	7	3	3	7	4	10	2	2	1	—	5
1479	Chemical and fertilizer mineral mining, n.e.c. ....	79	28	10	7	12	7	10	5	—	—	—	21
148	Nonmetallic minerals services, except fuels .....	177	75	47	32	18	4	1	—	—	—	—	40
1481	Nonmetallic minerals services, except fuels .....	177	75	47	32	18	4	1	—	—	—	—	40
149	Miscellaneous nonmetallic minerals, except fuels .....	352	149	55	62	53	19	12	—	2	—	—	102
1499	Miscellaneous nonmetallic minerals, except fuels .....	352	149	55	62	53	19	12	—	2	—	—	102

**Table 7. Industry Statistics by Employment-Size Class of Establishment: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group and employment-size class	E <sup>1</sup>	Estab- lishments during year (number)	All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
				Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
	<b>All Industries .....</b>	—	33 617	698.1	21 739.1	451.1	942.2	12 443.2	110 959.1	62 423.4	157 964.3	15 418.2
	Establishments with an average of—											
	0 to 4 employees .....	E3	16 950	28.2	618.5	21.0	41.4	405.3	6 535.6	4 051.5	9 461.3	1 125.8
	5 to 9 employees .....	E2	5 665	37.8	869.8	26.7	55.0	576.2	5 105.7	4 549.9	8 900.3	755.2
	10 to 19 employees .....	E1	4 703	64.2	1 558.2	46.7	96.3	1 063.2	8 244.4	6 316.4	13 502.1	1 058.6
	20 to 49 employees .....	E1	3 755	113.8	3 046.4	83.8	175.9	2 068.3	15 225.7	14 531.4	27 721.7	2 035.3
	50 to 99 employees .....	—	1 307	89.1	2 630.6	60.9	129.2	1 585.8	14 367.0	9 898.6	22 431.8	1 833.8
	100 to 249 employees .....	—	785	119.2	3 890.9	79.3	167.2	2 353.8	17 499.5	7 811.6	22 624.7	2 686.4
	250 to 499 employees .....	—	290	98.2	3 548.5	61.9	129.1	2 071.0	13 790.7	5 644.6	17 598.6	1 836.6
	500 to 999 employees .....	—	115	77.2	2 869.9	40.2	84.0	1 299.4	14 673.8	5 112.3	17 928.5	1 857.7
	1,000 to 2,499 employees .....	—	44	70.3	2 706.5	30.6	64.3	1 020.2	15 516.7	4 507.1	17 795.3	2 228.6
	2,500 employees or more .....	—	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Covered by administrative records <sup>2</sup> .....	E9	12 485	30.8	484.7	24.8	46.1	357.9	2 773.4	1 062.4	3 464.5	371.3

See footnotes at end of table.

**Table 7. Industry Statistics by Employment-Size Class of Establishment: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Major group and employment-size class	E <sup>1</sup>	Estab- lishments during year (number)	All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
				Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
	<b>All industries—Con.</b>											
10	<b>Metal mining</b> .....	-	1 027	44.1	1 353.5	33.7	67.8	952.0	4 609.5	3 141.2	6 851.6	899.1
	Establishments with an average of—											
	0 to 4 employees .....	E5	473	7.1	214.8	4.7	9.9	130.8	454.0	404.2	646.4	211.8
	5 to 9 employees .....	E4	162	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	10 to 19 employees .....	E2	132	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	20 to 49 employees .....	E1	112	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	50 to 99 employees .....	-	55	3.8	136.9	2.4	5.1	70.5	298.4	236.5	501.2	33.6
	100 to 249 employees .....	-	54	8.0	252.4	6.0	12.0	173.9	1 087.4	571.4	1 399.8	259.0
	250 to 499 employees .....	-	20	6.6	193.7	5.1	10.4	134.3	860.9	424.6	1 209.7	75.8
	500 to 999 employees .....	-	14	9.3	282.0	7.6	15.3	219.0	1 093.0	920.9	1 881.0	132.8
	1,000 to 2,499 employees .....	-	4	9.2	273.8	7.7	15.1	223.5	815.8	583.6	1 213.4	186.1
	2,500 employees or more .....	-	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Covered by administrative records <sup>2</sup> .....	E9	280	.6	13.5	.6	1.1	11.5	23.2	25.2	44.7	3.7
12	<b>Coal mining</b> .....	-	3 905	163.4	5 567.0	128.7	259.3	4 251.4	17 067.9	10 552.5	25 955.2	1 665.2
	Establishments with an average of—											
	0 to 4 employees .....	E3	1 078	2.0	50.2	1.6	3.0	35.6	189.4	264.9	421.8	32.6
	5 to 9 employees .....	E5	625	4.3	104.3	3.3	6.5	75.7	319.6	253.4	540.7	32.3
	10 to 19 employees .....	E3	784	11.0	271.1	8.6	16.7	205.3	776.4	550.8	1 248.1	79.0
	20 to 49 employees .....	E1	740	22.6	660.5	18.0	35.6	502.5	1 821.6	2 119.6	3 771.8	169.3
	50 to 99 employees .....	-	290	98.7	3 597.2	77.3	157.8	2 733.4	11 250.1	6 418.3	16 609.2	1 059.2
	100 to 249 employees .....	-	229	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	250 to 499 employees .....	-	124	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	500 to 999 employees .....	-	31	25.1	883.7	19.9	39.5	699.0	2 710.9	945.5	3 363.7	292.8
	1,000 to 2,499 employees .....	-	4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Covered by administrative records <sup>2</sup> .....	E9	1 337	7.4	136.6	6.4	12.2	113.6	458.7	219.9	636.3	42.4
13	<b>Oil and gas extraction</b> .....	E1	22 910	377.9	11 960.5	206.2	437.3	5 283.3	80 048.8	44 031.7	112 363.0	11 717.4
	Establishments with an average of—											
	0 to 4 employees .....	E3	13 545	22.0	475.2	16.1	31.7	301.8	6 033.6	3 618.1	8 600.1	1 051.6
	5 to 9 employees .....	E2	3 648	24.0	552.1	16.3	33.7	348.8	4 224.4	3 939.4	7 545.3	618.6
	10 to 19 employees .....	E1	2 550	34.4	843.1	24.2	49.7	545.9	6 208.3	5 036.4	10 485.7	759.1
	20 to 49 employees .....	E1	1 887	57.2	1 517.0	40.5	84.3	963.2	10 702.9	10 967.4	20 209.9	1 460.5
	50 to 99 employees .....	-	681	46.6	1 359.2	30.3	64.3	750.7	21 790.9	6 839.8	16 181.2	3 281.1
	100 to 249 employees .....	-	376	55.9	1 803.8	30.9	67.8	825.1	(D)	4 073.4	13 241.9	(D)
	250 to 499 employees .....	-	128	43.7	1 574.6	18.5	39.9	550.8	6 556.4	2 834.3	8 238.4	1 152.3
	500 to 999 employees .....	-	60	94.0	3 835.5	29.5	65.9	997.1	24 532.1	6 722.7	27 860.6	3 394.3
	1,000 to 2,499 employees .....	-	33	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	2,500 employees or more .....	-	2	(D)	(D)	-	-	-	-	-	-	-
	Covered by administrative records <sup>2</sup> .....	E9	9 397	18.3	268.7	14.2	25.9	181.8	2 064.4	705.1	2 464.4	305.2
14	<b>Nonmetallic minerals, except fuels</b> .....	E1	5 775	112.7	2 858.0	82.5	177.9	1 956.4	9 232.9	4 698.0	12 794.5	1 136.4
	Establishments with an average of—											
	0 to 4 employees .....	E5	1 854	59.5	1 404.4	44.9	97.2	1 003.5	4 381.2	2 294.9	6 115.8	560.2
	5 to 9 employees .....	E2	1 230	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	10 to 19 employees .....	E1	1 237	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	20 to 49 employees .....	E1	1 016	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	50 to 99 employees .....	E1	281	43.3	1 152.1	31.5	68.2	772.0	3 813.1	1 956.4	5 273.6	496.0
	100 to 249 employees .....	-	126	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	250 to 499 employees .....	-	18	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	500 to 999 employees .....	-	10	9.9	301.5	6.1	12.4	181.1	1 038.7	446.7	1 405.1	80.3
	1,000 to 2,499 employees .....	-	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Covered by administrative records <sup>2</sup> .....	E9	1 471	4.4	65.9	3.6	6.8	51.1	227.1	112.1	319.2	20.1

Note: Data shown as (D) are included in underscored figures above.

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

<sup>2</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.



**Table 8. Employment at Auxiliaries and Related Facilities by Industry Group and Industry: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group and industry	1987		1982		1987 SIC code	Industry group and industry	1987		1982	
		Number of employees (1,000)	Payroll (million dollars)	Number of employees (1,000)	Payroll (million dollars)			Number of employees (1,000)	Payroll (million dollars)	Number of employees (1,000)	Payroll (million dollars)
	<b>All industries</b> .....	115.9	4 856.8	139.8	4 698.2	13	<b>Oil and gas extraction</b> .....	93.4	4 000.0	109.6	3 741.3
10	<b>Metal mining</b> .....	(D)	(D)	8.1	256.5	131 1311	Crude petroleum and natural gas .. Crude petroleum and natural gas .....	82.4	3 591.7	95.8	3 315.5
101	Iron ores .....	(D)	(D)	1.3	41.5	132 1321	Natural gas liquids .....	1.4	53.6	1.3	39.7
1011	Iron ores .....	(D)	(D)	1.3	41.5	132 1321	Natural gas liquids .....	1.4	53.6	1.3	39.7
102	Copper ores .....	1.0	47.3	2.1	73.6	138	Oil and gas field services .....	9.6	354.7	12.5	386.0
1021	Copper ores .....	1.0	47.3	2.1	73.6	1381 1382	Drilling oil and gas wells .....	2.9	104.6	4.9	155.0
103	Lead and zinc ores .....	(D)	(D)	.6	19.7	1389	Oil and gas field exploration services .....	.4	15.1	1.1	29.3
1031	Lead and zinc ores .....	(D)	(D)	.6	19.7	1389	Oil and gas field services, n.e.c. ....	6.4	235.0	6.6	201.7
104	Gold and silver ores .....	(D)	(D)	1.5	43.2	14	<b>Nonmetallic minerals, except fuels</b> .....	8.5	274.4	7.7	243.6
1041	Gold ores .....	(D)	(D)	(D)	(D)	141 1411	Dimension stone .....	(D)	(D)	.1	1.8
1044	Silver ores .....	(Z)	1.0	(D)	(D)	1411	Dimension stone .....	(D)	(D)	.1	1.8
106	Ferroalloy ores, except vanadium .....	(D)	(D)	(D)	(D)	142	Crushed and broken stone, including riprap .....	3.4	110.7	2.4	68.0
1061	Ferroalloy ores, except vanadium .....	(D)	(D)	(D)	(D)	1422 1423	Crushed and broken limestone .. Crushed and broken granite ..	2.2 .7	71.7 20.1	1.5 .2	45.3 6.3
108	Metal mining services .....	.2	7.9	(D)	(D)	1429	Crushed and broken stone, n.e.c. ....	.6	18.9	.6	16.3
1081	Metal mining services .....	.2	7.9	(D)	(D)	144	Sand and gravel .....	2.1	46.9	(D)	(D)
109	Miscellaneous metal ores .....	(D)	(D)	(NA)	(NA)	1442 1446	Construction sand and gravel .. Industrial sand .....	1.7 .3	34.7 12.2	(D) .3	(D) 8.5
1094	Uranium-radium-vanadium ores .....	.3	12.5	1.6	50.4	145	Clay, ceramic, and refractory minerals .....	(D)	(D)	1.1	29.7
1099	Miscellaneous metal ores, n.e.c. ....	(D)	(D)	(NA)	(NA)	1455 1459	Kaolin and ball clay .....	.9	43.3	.6	20.2
12	<b>Coal mining</b> .....	(D)	(D)	14.4	456.8	1459	Clay, ceramic, and refractory minerals, n.e.c. ....	(D)	(D)	.5	9.5
122	Bituminous coal and lignite mining .....	10.8	437.1	14.2	453.9	147	Chemical and fertilizer mineral mining .....	1.0	40.1	(D)	(D)
1221	Bituminous coal and lignite surface mining .....	5.7	244.9	(NA)	(NA)	1474	Potash, soda, and borate minerals .....	(D)	(D)	.6	29.0
1222	Bituminous coal underground mining .....	5.1	192.1	(NA)	(NA)	1475 1479	Phosphate rock .....	(D)	(D)	.9	27.8
123	Anthracite mining .....	(D)	(D)	(D)	(D)	149	Chemical and fertilizer mineral mining, n.e.c. ....	(D)	(D)	(NA)	(NA)
1231	Anthracite mining .....	(D)	(D)	(D)	(D)	1499	Miscellaneous nonmetallic minerals, except fuels .....	(D)	(D)	.1	1.8
124	Coal mining services .....	(D)	(D)	(D)	(D)		Miscellaneous nonmetallic minerals, except fuels .....	(D)	(D)	.1	1.8
1241	Coal mining services .....	(D)	(D)	(D)	(D)						

Note: Figures represent auxiliary establishments at different location from establishments managed or served, or at same location but not operated as an integral part of it. All figures in this table have been included in reports for industries with which they have been associated.

**Table 9. Selected Statistics by Type of Operation and Industry: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group, industry, and item	All types of operations	Producing establishments										Non- pro- ducing estab- lish- ments	
			Total	Mines only				Mines with preparation plants				Sepa- rately operated prepara- tion plants		Undistri- buted <sup>1</sup>
				Total	Under- ground mines	Open pit mines	Combina- tion methods, well operations, and other methods	Total	Under- ground mines	Open pit mines	Combina- tion and other methods			
	<b>ALL INDUSTRIES</b>													
	Establishments----- number--	33 617	32 947	12 356	1 401	1 597	9 358	4 208	401	3 627	180	816	15 567	670
	Employees----- 1,000-----	698.1	692.7	174.3	34.4	23.2	116.7	208.1	68.3	125.0	14.8	16.6	293.6	5.5
	Value added in mining ----- mil dol--	110 959.1	111 053.4	73 287.3	2 668.9	2 152.5	68 465.9	23 450.0	7 391.4	14 647.5	1 411.1	4 869.1	9 446.9	-94.2
10	<b>METAL MINING</b>													
	Establishments----- number--	1 027	910	148	84	58	6	140	44	87	9	23	599	117
	Employees----- 1,000-----	44.1	42.6	(D)	(D)	1.6	.1	(D)	(D)	19.9	5.5	1.3	(D)	1.5
	Value added in mining ----- mil dol--	4 609.5	4 633.8	(D)	(D)	128.1	7.4	(D)	(D)	2 939.7	441.1	298.5	249.1	-24.2
101	<b>Iron ores</b>													
	Establishments----- number--	51	50	27	-	27	-	12	1	11	-	5	6	1
	Employees----- 1,000-----	7.1	(D)	(D)	-	(D)	-	6.5	(D)	(D)	-	(D)	(D)	(D)
	Value added in mining ----- mil dol--	767.9	(D)	(D)	-	(D)	-	756.7	(D)	(D)	-	(D)	-	(D)
1011	<b>Iron ores</b>													
	Establishments----- number--	51	50	27	-	27	-	12	1	11	-	5	6	1
	Employees----- 1,000-----	7.1	(D)	(D)	-	(D)	-	6.5	(D)	(D)	-	(D)	(D)	(D)
	Value added in mining ----- mil dol--	767.9	(D)	(D)	-	(D)	-	756.7	(D)	(D)	-	(D)	-	(D)

See footnotes at end of table.

Table 9. **Selected Statistics by Type of Operation and Industry: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group, industry, and item	All types of operations	Producing establishments										Non- pro- ducing estab- lish- ments	
			Total	Mines only				Mines with preparation plants				Sepsa- rately operated prepara- tion plants		Undistri- buted <sup>1</sup>
				Total	Under- ground mines	Open pit mines	Combina- tion methods, well operations, and other methods	Total	Under- ground mines	Open pit mines	Combina- tion and other methods			
10	METAL MINING—Con.													
102	Copper ores													
	Establishments..... number.....	61	61	25	1	23	1	18	3	13	2	3	15	
	Employees..... 1,000.....	13.9	13.9	1.1	(D)	(D)	(D)	11.0	(D)	(D)	(D)	.7	1.0	
	Value added in mining..... mil dol.....	1 301.3	1 301.3	73.9	(D)	(D)	(D)	1 001.9	(D)	(D)	(D)	225.5	-	
1021	Copper ores													
	Establishments..... number.....	61	61	25	1	23	1	18	3	13	2	3	15	-
	Employees..... 1,000.....	13.9	13.9	1.1	(D)	(D)	(D)	11.0	(D)	(D)	(D)	.7	1.0	-
	Value added in mining..... mil dol.....	1 301.3	1 301.3	73.9	(D)	(D)	(D)	1 001.9	(D)	(D)	(D)	225.5	-	-
103	Lead and zinc ores													
	Establishments..... number.....	39	32	15	15	-	-	11	11	-	-	1	5	7
	Employees..... 1,000.....	2.0	(D)	.4	.4	-	-	1.3	1.3	-	-	(D)	(D)	(D)
	Value added in mining..... mil dol.....	176.2	(D)	23.8	23.8	-	-	148.4	148.4	-	-	(D)	-	(D)
1031	Lead and zinc ores													
	Establishments..... number.....	39	32	15	15	-	-	11	11	-	-	1	5	7
	Employees..... 1,000.....	2.0	(D)	.4	.4	-	-	1.3	1.3	-	-	(D)	(D)	(D)
	Value added in mining..... mil dol.....	176.2	(D)	23.8	23.8	-	-	148.4	148.4	-	-	(D)	-	(D)
104	Gold and silver ores													
	Establishments..... number.....	372	309	41	37	4	-	76	18	55	3	3	189	63
	Employees..... 1,000.....	13.1	(D)	.4	(D)	(D)	-	10.0	2.2	(D)	(D)	(D)	(D)	(D)
	Value added in mining..... mil dol.....	1 814.2	(D)	51.3	(D)	(D)	-	1 719.0	233.1	(D)	(D)	(D)	(D)	(D)
1041	Gold ores													
	Establishments..... number.....	319	261	4	-	4	-	67	11	53	3	3	187	58
	Employees..... 1,000.....	11.4	10.6	(D)	-	(D)	-	8.5	(D)	6.0	(D)	(D)	(D)	.8
	Value added in mining..... mil dol.....	1 689.1	1 700.0	(D)	-	(D)	-	1 599.9	(D)	1 334.0	(D)	(D)	(D)	-10.9
1044	Silver ores													
	Establishments..... number.....	53	48	37	37	-	-	9	7	2	-	-	2	5
	Employees..... 1,000.....	1.7	(D)	(D)	(D)	-	-	1.5	(D)	(D)	-	-	(Z)	(D)
	Value added in mining..... mil dol.....	125.1	(D)	(D)	(D)	-	-	119.1	(D)	(D)	-	-	-	(D)
106	Ferroalloy ores, except vanadium													
	Establishments..... number.....	58	52	1	-	1	-	4	3	1	-	1	46	6
	Employees..... 1,000.....	1.3	(D)	(D)	-	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)
	Value added in mining..... mil dol.....	61.1	(D)	(D)	-	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)
1061	Ferroalloy ores, except vanadium													
	Establishments..... number.....	58	52	1	-	1	-	4	3	1	-	1	46	6
	Employees..... 1,000.....	1.3	(D)	(D)	-	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)
	Value added in mining..... mil dol.....	61.1	(D)	(D)	-	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)
108	Metal mining services													
	Establishments..... number.....	268	268	-	-	-	-	-	-	-	-	-	268	-
	Employees..... 1,000.....	2.8	2.8	-	-	-	-	-	-	-	-	-	2.8	-
	Value added in mining..... mil dol.....	175.6	175.6	-	-	-	-	-	-	-	-	-	175.6	-
1081	Metal mining services													
	Establishments..... number.....	268	268	-	-	-	-	-	-	-	-	-	268	-
	Employees..... 1,000.....	2.8	2.8	-	-	-	-	-	-	-	-	-	2.8	-
	Value added in mining..... mil dol.....	175.6	175.6	-	-	-	-	-	-	-	-	-	175.6	-
109	Miscellaneous metal ores													
	Establishments..... number.....	178	138	39	31	3	5	19	8	7	4	10	70	40
	Employees..... 1,000.....	3.8	(D)	(D)	.4	.1	(D)	1.7	(D)	.9	(D)	.4	(D)	(D)
	Value added in mining..... mil dol.....	313.1	(D)	(D)	24.3	8.9	(D)	204.8	(D)	105.5	(D)	60.4	(D)	(D)
1094	Uranium-radium- vanadium ores													
	Establishments..... number.....	101	71	37	31	1	5	12	7	1	4	7	15	30
	Employees..... 1,000.....	2.3	1.8	.5	.4	(D)	(D)	.8	(D)	(D)	(D)	.3	.3	.4
	Value added in mining..... mil dol.....	174.7	176.3	32.5	24.3	(D)	(D)	86.6	(D)	(D)	(D)	57.2	-	-1.5
1099	Miscellaneous metal ores, n.e.c.													
	Establishments..... number.....	77	67	2	-	2	-	7	1	6	-	3	55	10
	Employees..... 1,000.....	1.6	(D)	(D)	-	(D)	-	.9	(D)	(D)	-	.1	(D)	(D)
	Value added in mining..... mil dol.....	138.4	(D)	(D)	-	(D)	-	118.2	(D)	(D)	-	3.2	(D)	(D)
12	COAL MINING													
	Establishments..... number.....	3 905	3 812	2 532	1 313	1 185	34	635	285	298	52	91	554	93
	Employees..... 1,000.....	163.4	(D)	(D)	33.4	(D)	1.3	91.3	(D)	31.5	(D)	(D)	(D)	(D)
	Value added in mining..... mil dol.....	17 067.9	(D)	(D)	2 605.6	(D)	157.1	11 805.9	(D)	5 050.9	(D)	(D)	279.6	(D)

See footnotes at end of table.



Table 9. **Selected Statistics by Type of Operation and Industry: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group, industry, and item	All types of operations	Producing establishments										Non- producing estab- lish- ments	
			Total	Mines only				Mines with preparation plants				Sepa- rately operated prepara- tion plants		Undistri- buted <sup>1</sup>
				Total	Under- ground mines	Open pit mines	Combina- tion methods, well operations, and other methods	Total	Under- ground mines	Open pit mines	Combina- tion and other methods			
12	COAL MINING—Con.													
122	Bituminous coal and lignite mining													
	Establishments..... number..	3 507	3 417	2 457	1 249	1 176	32	620	283	292	45	81	259	90
	Employees..... 1,000.....	157.5	(D)	(D)	33.0	18.1	(D)	90.3	55.2	31.0	4.1	3.2	10.8	(D)
	Value added in mining..... mil dol.	16 678.9	(D)	(D)	2 584.9	1 783.2	(D)	11 748.5	6 207.5	5 019.1	521.9	429.0	-	(D)
1221	Bituminous coal and lignite surface mining													
	Establishments..... number..	1 804	1 755	1 208	-	1 176	32	337	-	292	45	81	129	49
	Employees..... 1,000.....	63.8	(D)	(D)	-	18.1	(D)	35.1	-	31.0	4.1	3.2	5.7	(D)
	Value added in mining..... mil dol.	7 893.7	(D)	(D)	-	1 783.2	(D)	5 541.0	-	5 019.1	521.9	429.0	-	(D)
1222	Bituminous coal underground mining													
	Establishments..... number..	1 703	1 662	1 249	1 249	-	-	283	283	-	-	-	130	41
	Employees..... 1,000.....	93.7	93.3	33.0	33.0	-	-	55.2	55.2	-	-	-	5.1	.4
	Value added in mining..... mil dol.	8 785.2	8 792.4	2 584.9	2 584.9	-	-	6 207.5	6 207.5	-	-	-	-	-7.1
123	Anthracite mining													
	Establishments..... number..	107	104	75	64	9	2	15	2	6	7	10	4	3
	Employees..... 1,000.....	1.9	(D)	.7	.4	(D)	(D)	1.0	(D)	.6	(D)	(D)	(D)	(D)
	Value added in mining..... mil dol.	109.4	(D)	42.3	20.7	(D)	(D)	57.4	(D)	31.8	(D)	(D)	-	(D)
1231	Anthracite mining													
	Establishments..... number..	107	104	75	64	9	2	15	2	6	7	10	4	3
	Employees..... 1,000.....	1.9	(D)	.7	.4	(D)	(D)	1.0	(D)	.6	(D)	(D)	(D)	(D)
	Value added in mining..... mil dol.	109.4	(D)	42.3	20.7	(D)	(D)	57.4	(D)	31.8	(D)	(D)	-	(D)
124	Coal mining services													
	Establishments..... number..	291	291	-	-	-	-	-	-	-	-	-	291	-
	Employees..... 1,000.....	4.0	4.0	-	-	-	-	-	-	-	-	-	4.0	-
	Value added in mining..... mil dol.	279.6	279.6	-	-	-	-	-	-	-	-	-	279.6	-
1241	Coal mining services													
	Establishments..... number..	291	291	-	-	-	-	-	-	-	-	-	291	-
	Employees..... 1,000.....	4.0	4.0	-	-	-	-	-	-	-	-	-	4.0	-
	Value added in mining..... mil dol.	279.6	279.6	-	-	-	-	-	-	-	-	-	279.6	-
13	OIL AND GAS EXTRACTION													
	Establishments..... number..	22 910	22 513	9 308	-	-	9 308	-	-	-	-	646	12 559	397
	Employees..... 1,000.....	377.9	(D)	114.2	-	-	114.2	-	-	-	-	(D)	250.3	(D)
	Value added in mining..... mil dol.	80 048.8	(D)	67 972.7	-	-	67 972.7	-	-	-	-	(D)	8 068.9	(D)
131	Crude petroleum and natural gas													
	Establishments..... number..	10 203	9 846	9 308	-	-	9 308	-	-	-	-	-	538	357
	Employees..... 1,000.....	198.8	196.6	114.2	-	-	114.2	-	-	-	-	-	82.4	2.2
	Value added in mining..... mil dol.	67 954.9	67 972.7	67 972.7	-	-	67 972.7	-	-	-	-	-	-	-17.7
1311	Crude petroleum and natural gas													
	Establishments..... number..	10 203	9 846	9 308	-	-	9 308	-	-	-	-	-	538	357
	Employees..... 1,000.....	198.8	196.6	114.2	-	-	114.2	-	-	-	-	-	82.4	2.2
	Value added in mining..... mil dol.	67 954.9	67 972.7	67 972.7	-	-	67 972.7	-	-	-	-	-	-	-17.7
132	Natural gas liquids													
	Establishments..... number..	714	674	-	-	-	-	-	-	-	-	646	28	40
	Employees..... 1,000.....	12.7	(D)	-	-	-	-	-	-	-	-	(D)	1.4	(D)
	Value added in mining..... mil dol.	4 024.9	(D)	-	-	-	-	-	-	-	-	(D)	-	(D)
1321	Natural gas liquids													
	Establishments..... number..	714	674	-	-	-	-	-	-	-	-	646	28	40
	Employees..... 1,000.....	12.7	(D)	-	-	-	-	-	-	-	-	(D)	1.4	(D)
	Value added in mining..... mil dol.	4 024.9	(D)	-	-	-	-	-	-	-	-	(D)	-	(D)
138	Oil and gas field services													
	Establishments..... number..	11 993	11 993	-	-	-	-	-	-	-	-	-	11 993	-
	Employees..... 1,000.....	166.5	166.5	-	-	-	-	-	-	-	-	-	166.5	-
	Value added in mining..... mil dol.	8 068.9	8 068.9	-	-	-	-	-	-	-	-	-	8 068.9	-
1381	Drilling oil and gas wells													
	Establishments..... number..	2 591	2 591	-	-	-	-	-	-	-	-	-	2 591	-
	Employees..... 1,000.....	55.0	55.0	-	-	-	-	-	-	-	-	-	55.0	-
	Value added in mining..... mil dol.	2 549.4	2 549.4	-	-	-	-	-	-	-	-	-	2 549.4	-
1382	Oil and gas field exploration services													
	Establishments..... number..	1 917	1 917	-	-	-	-	-	-	-	-	-	1 917	-
	Employees..... 1,000.....	16.9	16.9	-	-	-	-	-	-	-	-	-	16.9	-
	Value added in mining..... mil dol.	771.3	771.3	-	-	-	-	-	-	-	-	-	771.3	-

See footnotes at end of table.

Table 9. **Selected Statistics by Type of Operation and Industry: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group, industry, and item	All types of operations	Producing establishments										Non- pro- ducing estab- lish- ments	
			Total	Mines only				Mines with preparation plants				Separately operated prepara- tion plants		Undistri- buted <sup>1</sup>
				Total	Under- ground mines	Open pit mines	Combina- tion methods, well operations, and other methods	Total	Under- ground mines	Open pit mines	Combina- tion and other methods			
13	<b>OIL AND GAS EXTRACTION—Con.</b>													
138	<b>Oil and gas field services—Con.</b>													
1389	<b>Oil and gas field services, n.e.c.</b>													
	Establishments..... number..	7 485	7 485	-	-	-	-	-	-	-	-	-	7 485	-
	Employees..... 1,000..	94.6	94.6	-	-	-	-	-	-	-	-	-	94.6	-
	Value added in mining..... mil dol..	4 748.2	4 748.2	-	-	-	-	-	-	-	-	-	4 748.2	-
14	<b>NONMETALLIC MINERALS, EXCEPT FUELS</b>													
	Establishments..... number..	5 775	5 712	368	4	354	10	3 433	72	3 242	119	56	1 855	63
	Employees..... 1,000..	112.7	112.2	4.4	(D)	(D)	1.0	(D)	6.9	73.6	(D)	(D)	21.2	.5
	Value added in mining..... mil dol..	9 232.9	9 243.6	566.5	(D)	(D)	328.7	(D)	660.0	6 656.9	(D)	(D)	849.2	-10.6
141	<b>Dimension stone</b>													
	Establishments..... number..	149	147	129	-	129	-	17	-	17	-	-	1	2
	Employees..... 1,000..	1.3	(D)	1.1	-	1.1	-	(D)	-	(D)	-	-	(D)	(D)
	Value added in mining..... mil dol..	64.7	(D)	55.8	-	55.8	-	(D)	-	(D)	-	-	-	(D)
1411	<b>Dimension stone</b>													
	Establishments..... number..	149	147	129	-	129	-	17	-	17	-	-	1	2
	Employees..... 1,000..	1.3	(D)	1.1	-	1.1	-	(D)	-	(D)	-	-	(D)	(D)
	Value added in mining..... mil dol..	64.7	(D)	55.8	-	55.8	-	(D)	-	(D)	-	-	-	(D)
142	<b>Crushed and broken stone, including riprap</b>													
	Establishments..... number..	2 002	1 992	23	1	21	1	1 839	48	1 779	12	19	111	10
	Employees..... 1,000..	43.7	(D)	(D)	(D)	.3	(D)	39.6	(D)	37.5	(D)	.3	3.4	(D)
	Value added in mining..... mil dol..	3 465.3	(D)	(D)	(D)	30.2	(D)	3 410.9	(D)	3 247.6	(D)	18.9	-	(D)
1422	<b>Crushed and broken limestone</b>													
	Establishments..... number..	1 335	1 330	15	-	14	1	1 227	44	1 172	11	12	76	5
	Employees..... 1,000..	28.9	(D)	.2	-	(D)	(D)	26.3	1.5	24.5	.3	(D)	2.2	(D)
	Value added in mining..... mil dol..	2 091.4	(D)	22.4	-	(D)	(D)	2 058.1	110.1	1 918.2	29.8	(D)	-	(D)
1423	<b>Crushed and broken granite</b>													
	Establishments..... number..	238	237	3	-	3	-	214	-	214	-	1	19	1
	Employees..... 1,000..	6.5	(D)	(D)	-	(D)	-	5.8	-	5.8	-	(D)	.7	(D)
	Value added in mining..... mil dol..	696.2	(D)	(D)	-	(D)	-	691.1	-	691.1	-	(D)	-	(D)
1429	<b>Crushed and broken stone, n.e.c.</b>													
	Establishments..... number..	429	425	5	1	4	-	398	4	393	1	6	16	4
	Employees..... 1,000..	8.3	(D)	(D)	(D)	(D)	-	7.5	(D)	7.2	(D)	.1	.6	(D)
	Value added in mining..... mil dol..	677.8	(D)	(D)	(D)	(D)	-	661.8	(D)	638.3	(D)	7.9	-	(D)
144	<b>Sand and gravel</b>													
	Establishments..... number..	2 750	2 727	79	1	77	1	1 101	3	1 017	81	34	1 513	23
	Employees..... 1,000..	32.8	(D)	(D)	(D)	.6	(D)	18.3	(D)	16.7	(D)	(D)	13.0	(D)
	Value added in mining..... mil dol..	2 319.9	(D)	(D)	(D)	33.6	(D)	1 507.5	(D)	1 396.0	(D)	(D)	730.2	(D)
1442	<b>Construction sand and gravel</b>													
	Establishments..... number..	2 559	2 537	78	1	76	1	925	3	848	74	32	1 502	22
	Employees..... 1,000..	28.9	28.7	.6	(D)	(D)	(D)	14.7	(D)	13.3	(D)	.7	12.7	.2
	Value added in mining..... mil dol..	2 011.6	2 014.5	33.7	(D)	(D)	(D)	1 200.6	(D)	1 101.7	(D)	50.0	730.2	-2.9
1446	<b>Industrial sand</b>													
	Establishments..... number..	191	190	1	-	1	-	176	-	169	7	2	11	1
	Employees..... 1,000..	3.9	(D)	(D)	-	(D)	-	3.6	-	3.4	.2	(D)	.3	(D)
	Value added in mining..... mil dol..	308.3	(D)	(D)	-	(D)	-	306.9	-	294.3	12.6	(D)	-	(D)
145	<b>Clay, ceramic, and refractory minerals</b>													
	Establishments..... number..	197	195	65	-	65	-	115	-	112	3	-	15	2
	Employees..... 1,000..	9.9	(D)	(D)	-	(D)	-	8.1	-	(D)	(D)	-	(D)	(D)
	Value added in mining..... mil dol..	827.2	(D)	(D)	-	(D)	-	770.0	-	(D)	(D)	-	-	(D)
1455	<b>Kaolin and ball clay</b>													
	Establishments..... number..	45	45	3	-	3	-	35	-	35	-	-	7	-
	Employees..... 1,000..	5.3	5.3	(D)	-	(D)	-	(D)	-	(D)	-	-	.9	-
	Value added in mining..... mil dol..	498.6	498.6	(D)	-	(D)	-	(D)	-	(D)	-	-	-	-

See footnotes at end of table.



Table 9. **Selected Statistics by Type of Operation and Industry: 1987—Con.**

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1987 SIC code	Industry group, industry, and item	All types of operations	Producing establishments										Non- pro- ducing estab- lish- ments	
			Total	Mines only				Mines with preparation plants				Seps- arately operated prepara- tion plants		Undistri- buted <sup>1</sup>
				Total	Under- ground mines	Open pit mines	Combina- tion methods, well operations, and other methods	Total	Under- ground mines	Open pit mines	Combina- tion and other methods			
14	NONMETALLIC MINERALS, EXCEPT FUELS—Con.													
145	Clay, ceramic, and refractory minerals— Con.													
1459	Clay, ceramic, and refractory minerals, n.e.c.													
	Establishments..... number..	152	150	62	-	62	-	80	-	77	3	-	8	2
	Employees..... 1,000..	4.6	(D)	.6	-	.6	-	(D)	-	3.7	(D)	-	(D)	(D)
	Value added in mining..... mil dol..	328.6	(D)	57.2	-	57.2	-	(D)	-	271.2	(D)	-	-	(D)
147	Chemical and fertilizer mineral mining													
	Establishments..... number..	148	139	42	1	33	8	71	19	39	13	1	25	9
	Employees..... 1,000..	16.3	16.2	(D)	(D)	(D)	(D)	13.7	(D)	6.3	(D)	(D)	1.0	.1
	Value added in mining..... mil dol..	1 998.9	2 003.1	(D)	(D)	(D)	(D)	1 632.9	(D)	884.0	(D)	(D)	-	-4.1
1474	Potash, soda, and borate minerals													
	Establishments..... number..	30	27	-	-	-	-	25	8	7	10	-	2	3
	Employees..... 1,000..	6.9	(D)	-	-	-	-	(D)	3.1	(D)	(D)	-	(D)	(D)
	Value added in mining..... mil dol..	915.0	(D)	-	-	-	-	(D)	381.8	(D)	(D)	-	-	(D)
1475	Phosphate rock													
	Establishments..... number..	39	36	10	-	9	1	23	1	21	1	1	2	3
	Employees..... 1,000..	5.3	(D)	(D)	-	(D)	(D)	4.8	(D)	(D)	(D)	(D)	(D)	(D)
	Value added in mining..... mil dol..	595.1	(D)	(D)	-	(D)	(D)	560.1	(D)	(D)	(D)	(D)	-	(D)
1479	Chemical and fertilizer mineral mining, n.e.c.													
	Establishments..... number..	79	76	32	1	24	7	23	10	11	2	-	21	3
	Employees..... 1,000..	4.2	(D)	(D)	(D)	(D)	(D)	(D)	1.7	.3	(D)	-	(D)	(D)
	Value added in mining..... mil dol..	488.7	(D)	(D)	(D)	(D)	(D)	(D)	130.5	27.3	(D)	-	-	(D)
148	Nonmetallic minerals services, except fuels													
	Establishments..... number..	177	177	-	-	-	-	-	-	-	-	-	177	-
	Employees..... 1,000..	1.8	1.8	-	-	-	-	-	-	-	-	-	1.8	-
	Value added in mining..... mil dol..	119.0	119.0	-	-	-	-	-	-	-	-	-	119.0	-
1481	Nonmetallic minerals services, except fuels													
	Establishments..... number..	177	177	-	-	-	-	-	-	-	-	-	177	-
	Employees..... 1,000..	1.8	1.8	-	-	-	-	-	-	-	-	-	1.8	-
	Value added in mining..... mil dol..	119.0	119.0	-	-	-	-	-	-	-	-	-	119.0	-
149	Miscellaneous nonmetallic minerals, except fuels													
	Establishments..... number..	352	335	30	1	29	-	290	2	278	10	2	13	17
	Employees..... 1,000..	7.0	6.8	(D)	(D)	.4	-	5.5	(D)	4.8	(D)	(D)	(D)	.2
	Value added in mining..... mil dol..	438.0	440.6	(D)	(D)	15.8	-	419.5	(D)	350.9	(D)	(D)	-	-2.5
1499	Miscellaneous nonmetallic minerals, except fuels													
	Establishments..... number..	352	335	30	1	29	-	290	2	278	10	2	13	17
	Employees..... 1,000..	7.0	6.8	(D)	(D)	.4	-	5.5	(D)	4.8	(D)	(D)	(D)	.2
	Value added in mining..... mil dol..	438.0	440.6	(D)	(D)	15.8	-	419.5	(D)	350.9	(D)	(D)	-	-2.5

<sup>1</sup>Includes data for separately operated auxiliary establishments and establishments that were not possible to classify based on information available.

**Table 10. Selected Statistics for Nonproducing Establishments by Industry Group and Industry: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

1987 SIC code	Industry group and industry	1987							1982		
		Establishments during year		All employees		Production, development, and exploration workers			Capital expenditures (million dollars)	All employees (1,000)	Capital expenditures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)			
	All Industries -----	670	69	5.5	169.4	3.2	5.6	93.7	329.3	11.5	1 774.2
10	Metal mining-----	117	18	1.5	46.0	1.0	1.7	28.9	87.6	4.2	332.1
101	Iron ores -----	1	-	(D)	(D)	(D)	(D)	(D)	(D)	.1	2.5
1011	Iron ores -----	1	-	(D)	(D)	(D)	(D)	(D)	(D)	.1	2.5
103	Lead and zinc ores -----	7	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1031	Lead and zinc ores -----	7	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
104	Gold and silver ores -----	63	13	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1041	Gold ores -----	58	11	.8	25.1	.6	.9	15.3	58.6	.8	98.5
1044	Silver ores -----	5	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
106	Ferroalloy ores, except vanadium -----	6	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1061	Ferroalloy ores, except vanadium -----	6	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
109	Miscellaneous metal ores -----	40	5	(D)	(D)	(D)	(D)	(D)	(D)	1.4	96.4
1094	Uranium-radium-vanadium ores -----	30	4	.4	12.9	.3	.4	8.2	23.2	1.3	93.0
1099	Miscellaneous metal ores, n.e.c. -----	10	1	(D)	(D)	(D)	(D)	(D)	(D)	.1	3.4
12	Coal mining -----	93	11	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
122	Bituminous coal and lignite mining -----	90	11	(D)	(D)	(D)	(D)	(D)	(D)	1.3	107.7
1221	Bituminous coal and lignite surface mining -----	49	6	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
1222	Bituminous coal underground mining -----	41	5	.4	9.9	.2	.4	6.6	.2	(NA)	(NA)
123	Anthracite mining -----	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1231	Anthracite mining -----	3	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
13	Oil and gas extraction -----	397	31	(D)	(D)	(D)	(D)	(D)	(D)	5.0	1 294.8
131	Crude petroleum and natural gas -----	357	25	2.2	72.2	1.0	1.6	30.8	178.2	5.0	1 294.5
1311	Crude petroleum and natural gas -----	357	25	2.2	72.2	1.0	1.6	30.8	178.2	5.0	1 294.5
132	Natural gas liquids -----	40	6	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	.3
1321	Natural gas liquids -----	40	6	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	.3
14	Nonmetallic minerals, except fuels -----	63	9	.5	12.5	.4	.6	7.1	16.7	(D)	(D)
141	Dimension stone -----	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	-
1411	Dimension stone -----	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	-
142	Crushed and broken stone, including riprap -----	10	-	(D)	(D)	(D)	(D)	(D)	(D)	.2	6.8
1422	Crushed and broken limestone -----	5	-	(D)	(D)	(D)	(D)	(D)	(D)	.2	6.8
1423	Crushed and broken granite -----	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	-
1429	Crushed and broken stone, n.e.c. -----	4	-	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	(Z)
144	Sand and gravel -----	23	4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1442	Construction sand and gravel -----	22	4	.2	3.8	.2	.3	3.1	.6	.4	12.4
1446	Industrial sand -----	1	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
145	Clay, ceramic, and refractory minerals -----	2	1	(D)	(D)	(D)	(D)	(D)	(D)	.1	.1
1459	Clay, ceramic, and refractory minerals, n.e.c. -----	2	1	(D)	(D)	(D)	(D)	(D)	(D)	.1	.1
147	Chemical and fertilizer mineral mining -----	9	1	.1	2.5	(Z)	(Z)	.9	13.4	.1	19.7
1474	Potash, soda, and borate minerals -----	3	-	(D)	(D)	(D)	(D)	(D)	(D)	-	-
1475	Phosphate rock -----	3	-	(D)	(D)	(D)	(D)	(D)	(D)	.1	19.6
1479	Chemical and fertilizer mineral mining, n.e.c. -----	3	1	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	.1
149	Miscellaneous nonmetallic minerals, except fuels -----	17	3	.2	3.2	.1	.2	2.1	2.4	(Z)	.1
1499	Miscellaneous nonmetallic minerals, except fuels -----	17	3	.2	3.2	.1	.2	2.1	2.4	(Z)	.1





# CHAPTER 3. Geographic Area Statistics

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**Table 1. Statistics for States and Offshore Areas: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area	1987							
	Companies (number)	Establishments during year		All employees		Production, development, and exploration workers		
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)
<b>United States</b> .....	<b>25 218</b>	<b>33 617</b>	<b>6 299</b>	<b>698.1</b>	<b>21 739.1</b>	<b>451.1</b>	<b>942.2</b>	<b>12 443.2</b>
Alabama .....	280	350	99	11.1	320.6	8.1	16.6	228.0
Alaska .....	141	175	47	7.4	404.1	4.4	10.0	231.8
Arizona .....	206	244	53	12.8	372.3	9.9	18.7	266.0
Arkansas .....	382	416	43	4.0	92.5	2.8	5.8	58.8
California .....	1 155	1 387	350	44.1	1 383.8	25.2	51.9	695.9
Colorado .....	1 140	1 309	202	21.7	790.4	9.6	20.2	285.4
Connecticut .....	76	87	24	1.5	55.2	.6	1.3	18.3
Delaware and District of Columbia .....	25	27	4	.5	12.7	.2	.3	4.1
Florida .....	298	343	78	9.6	231.9	7.5	15.3	164.5
Georgia .....	156	216	83	8.1	211.5	6.4	14.4	152.0
Hawaii .....	9	9	4	.2	7.4	.2	.4	5.7
Idaho .....	97	109	23	2.4	71.6	1.8	3.8	50.6
Illinois .....	835	977	162	22.5	727.8	16.8	33.1	511.3
Indiana .....	359	472	78	7.7	241.5	5.7	12.1	170.2
Iowa .....	101	200	31	2.4	58.1	1.6	3.5	33.5
Kansas .....	1 207	1 309	146	12.5	301.5	8.1	16.7	172.1
Kentucky .....	1 220	1 460	414	39.5	1 222.9	31.3	64.3	946.0
Louisiana .....	1 649	1 963	425	50.7	1 593.9	32.3	69.2	873.0
Maine .....	32	34	1	.2	2.9	.1	.2	1.9
Maryland .....	112	129	43	2.9	81.4	2.4	5.2	62.5
Massachusetts .....	100	108	18	1.8	54.8	1.0	2.1	27.7
Michigan .....	471	543	86	9.8	273.0	7.5	15.8	191.8
Minnesota .....	144	161	28	6.1	185.8	4.8	9.8	137.6
Mississippi .....	491	525	71	5.3	124.7	4.0	8.5	87.2
Missouri .....	252	326	65	5.6	165.2	3.9	8.0	103.1
Montana .....	373	398	60	5.7	163.4	4.1	8.2	107.7
Nebraska .....	201	228	17	1.6	36.2	1.0	2.1	21.7
Nevada .....	232	264	74	7.6	231.8	6.2	12.9	179.3
New Hampshire .....	48	53	9	.5	12.0	.4	.8	8.7
New Jersey .....	141	154	44	4.2	153.3	1.9	4.0	46.7
New Mexico .....	679	752	150	14.8	437.7	10.6	22.4	301.7
New York .....	396	466	77	8.8	342.1	3.9	8.7	98.8
North Carolina .....	125	191	75	4.0	95.5	2.9	6.5	63.3
North Dakota .....	296	326	44	4.0	119.5	3.0	6.1	86.8
Ohio .....	1 080	1 240	199	19.0	550.1	13.8	29.7	379.5
Oklahoma .....	2 700	2 981	358	46.0	1 387.1	21.6	45.2	500.4
Oregon .....	168	172	16	1.4	33.5	1.0	2.0	20.9
Pennsylvania .....	1 144	1 382	314	33.4	977.6	24.7	50.7	705.2
Rhode Island .....	15	16	4	.2	5.3	.2	.3	4.4
South Carolina .....	57	85	30	1.5	34.9	1.2	2.8	26.4
South Dakota .....	75	84	10	2.1	62.3	1.7	3.5	48.7
Tennessee .....	276	341	92	6.5	158.5	4.7	10.1	106.4
Texas .....	7 029	8 021	1 251	158.0	5 137.8	83.5	178.0	2 113.3
Utah .....	337	380	68	7.9	236.7	5.7	11.9	161.8
Vermont .....	42	45	9	.7	18.1	.5	.9	9.3
Virginia .....	593	723	252	18.8	546.8	14.7	29.7	412.0
Washington .....	179	189	20	2.8	83.8	2.2	4.4	61.4
West Virginia .....	1 048	1 259	350	35.4	1 180.2	28.4	58.3	957.3
Wisconsin .....	156	169	27	1.8	46.3	1.4	2.9	32.3
Wyoming .....	658	774	142	17.1	579.9	12.7	26.7	413.5
Offshore areas not associated with a particular State:								
Atlantic Offshore .....	7	7	2	(D)	(D)	(D)	(D)	(D)
Northern Gulf of Mexico Offshore .....	24	32	25	3.4	115.5	2.9	6.3	93.1
Pacific Offshore .....	6	6	2	(D)	(D)	(D)	(D)	(D)

1987—Con.						1982					Geographic area
Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	Inventories		All employees		Value added by mining (million dollars)	Value of shipments (million dollars)	Capital expenditures (million dollars)	
				End of year (million dollars)	Beginning of year (million dollars)	Number (1,000)	Payroll (million dollars)				
110 959.1	62 423.4	157 964.3	15 418.2	7 380.0	7 564.0	1 113.6	28 637.5	188 055.0	249 999.6	47 752.8	U.S.
1 234.7	729.5	1 792.6	171.6	133.8	132.4	15.9	375.0	1 979.7	2 428.5	592.8	AL
8 018.8	1 340.2	8 566.6	792.4	273.7	286.6	13.4	524.8	14 093.2	13 782.5	3 241.7	AK
1 142.8	840.9	1 751.7	232.0	329.2	310.0	16.6	426.5	748.4	1 352.5	167.2	AZ
521.3	852.0	1 231.7	141.6	34.2	35.7	5.4	115.3	1 015.1	1 201.2	215.0	AR
6 484.2	3 149.0	8 693.2	939.9	397.6	389.4	51.3	1 466.2	11 844.3	13 643.0	3 438.1	CA
1 832.1	1 148.0	2 591.3	388.8	212.7	211.3	45.8	1 320.4	3 098.3	4 127.5	1 340.3	CO
105.6	36.5	130.2	11.8	12.0	13.1	1.9	67.6	47.3	65.4	5.6	CT
11.4	6.8	17.4	.8	1.4	2.0	.2	5.7	2.2	3.0	.2	DE/DC
1 027.4	617.7	1 478.6	166.5	246.9	305.3	10.5	216.0	1 860.4	2 775.5	321.9	FL
827.6	487.2	1 192.7	122.1	108.3	111.7	7.6	142.2	430.1	722.8	81.5	GA
23.5	10.4	31.1	2.8	2.5	3.1	.2	3.8	9.7	12.8	2.7	HI
171.3	107.6	242.8	36.1	73.5	69.6	3.1	86.6	199.5	303.7	31.6	ID
2 180.5	1 054.4	3 026.4	208.5	226.9	252.2	31.3	845.1	2 543.9	3 607.8	512.7	IL
815.4	394.5	1 118.2	91.7	98.6	105.1	10.3	269.1	785.8	1 155.8	90.0	IN
131.3	79.1	195.5	15.0	28.6	25.9	2.1	38.2	103.5	153.1	16.9	IA
1 671.7	2 087.0	3 566.3	192.4	108.9	95.9	19.9	461.2	3 195.7	6 344.7	418.5	KS
3 698.6	2 618.6	5 956.8	360.4	312.5	324.5	54.2	1 371.7	4 141.9	7 336.1	637.0	KY
16 655.7	11 005.9	24 629.7	3 032.0	497.0	529.3	102.4	2 694.4	33 117.0	43 786.1	9 284.1	LA
5.5	4.2	8.1	1.6	1.9	1.3	.1	2.3	5.3	7.7	.4	ME
273.9	138.9	370.6	42.2	32.7	34.3	2.6	58.6	167.3	223.4	29.8	MD
132.0	64.7	177.7	18.9	20.6	20.4	1.1	24.6	54.4	73.5	10.0	MA
1 499.6	1 097.4	2 425.9	171.1	114.7	107.9	10.7	276.7	1 934.7	2 659.4	256.1	MI
554.5	469.6	999.4	24.7	179.8	167.7	9.2	247.9	598.8	1 049.3	53.3	MN
930.8	345.9	1 128.2	148.6	34.8	31.6	9.6	213.2	1 765.7	2 156.6	542.2	MS
466.1	205.4	635.5	36.1	88.2	94.8	7.9	198.0	418.2	604.4	80.2	MO
1 167.1	383.3	1 431.7	118.6	77.2	72.8	8.5	213.7	1 694.9	2 026.1	425.2	MT
119.0	62.1	163.9	17.2	10.6	10.1	2.3	46.5	246.0	334.5	45.0	NE
1 177.5	643.7	1 468.6	352.5	144.3	118.1	6.6	154.9	467.6	608.0	124.1	NV
40.9	12.8	49.8	3.9	6.1	5.8	.3	6.7	17.3	25.2	2.5	NH
241.2	116.2	326.2	31.2	37.1	36.4	3.4	101.8	120.1	181.3	16.5	NJ
3 539.1	1 869.7	4 981.5	427.3	255.1	307.0	26.6	660.0	7 126.7	9 683.3	1 423.3	NM
484.3	219.9	641.7	62.5	86.5	78.7	7.8	204.5	414.7	576.8	99.2	NY
414.2	152.0	526.9	39.3	47.5	49.9	4.0	67.6	198.3	303.9	33.6	NC
978.1	341.4	1 219.6	99.8	65.7	72.3	8.5	226.1	1 999.1	2 229.0	1 100.7	ND
1 839.8	1 054.1	2 662.8	231.1	171.9	168.8	28.9	707.6	2 325.5	3 237.1	547.9	OH
5 523.1	3 707.4	8 388.6	841.8	265.6	286.0	104.1	2 666.6	13 274.5	18 447.0	4 522.4	OK
78.5	44.1	112.4	10.2	12.3	11.6	1.8	37.0	60.3	80.4	12.5	OR
2 561.6	1 821.6	4 102.0	281.2	275.9	263.4	48.0	1 180.2	2 936.8	4 575.6	540.2	PA
15.6	6.7	20.4	2.0	2.5	2.7	.2	2.9	7.3	9.8	.8	RI
143.1	85.1	178.5	49.7	15.5	14.4	1.5	24.0	72.2	108.6	16.4	SC
190.8	101.0	262.6	29.1	21.0	20.0	2.3	49.7	115.9	172.7	28.2	SD
458.4	263.0	661.0	60.4	60.9	62.1	9.0	186.1	497.7	793.1	101.4	TN
29 676.5	14 468.3	40 319.0	3 825.8	1 243.3	1 309.5	266.8	6 755.5	54 452.6	72 462.2	12 247.7	TX
1 552.0	582.5	1 951.8	182.7	203.2	209.5	17.5	466.8	1 664.8	2 700.9	624.3	UT
57.8	39.4	89.5	7.7	12.5	11.7	.8	15.1	36.1	57.9	8.0	VT
1 554.4	1 312.1	2 664.4	202.1	175.4	170.2	24.4	532.7	1 466.8	2 677.6	271.7	VA
275.7	137.0	380.3	32.3	32.6	31.6	2.8	66.8	161.9	237.5	43.4	WA
3 674.1	2 665.4	5 889.0	450.4	237.7	262.8	63.1	1 679.9	4 789.8	7 312.9	898.3	WV
155.2	78.5	209.3	24.4	28.4	29.1	1.9	38.4	85.8	131.5	10.4	WI
4 362.0	2 060.4	5 846.5	575.9	301.4	279.7	34.2	939.6	6 858.8	8 606.9	2 198.7	WY
(D)	(D)	(D)	(D)	(D)	(D)	.9	21.0	96.9	123.5	88.2	AO
252.3	(D)	1 449.0	(D)	18.2	17.7	3.2	95.4	2 218.2	2 191.0	733.9	GO
(D)	(D)	(D)	(D)	(D)	(D)	1.3	39.3	488.3	529.0	218.7	PO



**Table 2. Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments for States and Offshore Areas: 1987**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	United States	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connecticut
Capital expenditures during year (except land and mineral rights)	15 418.2	171.6	792.4	232.0	141.6	939.9	388.8	11.8
New capital expenditures during year	7 349.2	90.2	438.8	192.3	40.1	431.4	155.0	10.3
Buildings and other structures, except land	939.2	8.0	295.1	4.0	3.7	24.9	27.0	.3
Machinery and equipment	6 410.0	82.1	143.7	188.2	36.5	406.5	128.1	9.9
Used capital expenditures during year	1 120.1	14.7	19.3	23.1	11.4	33.9	26.8	1.1
Buildings and other structures, except land	105.6	.1	.3	.3	.4	9.1	1.1	(Z)
Machinery and equipment	1 014.6	14.6	19.0	22.8	11.0	24.8	25.7	1.1
Mineral exploration and development <sup>1</sup>	6 948.9	66.7	334.3	16.6	90.0	474.6	207.0	.5
Capitalized mineral land and rights <sup>2</sup>	279.2	1.0	2.1	3.8	.5	9.3	7.4	.4
Deductions from depreciable assets during year <sup>3</sup>	3 742.2	56.9	29.2	33.3	14.5	97.2	112.7	2.8
Buildings and other structures, except land <sup>4</sup>	205.5	1.8	.6	2.6	.5	4.7	3.8	.1
Machinery and equipment <sup>4</sup>	3 126.1	50.8	28.2	28.3	12.9	87.9	91.6	2.4
Mineral exploration and development <sup>2</sup>	290.3	1.4	.2	1.4	.1	1.1	15.6	.1
Mineral land and rights <sup>2</sup>	120.3	3.0	.1	1.0	1.0	3.4	1.7	.2
Depreciation and depletion charges for year <sup>3</sup>	5 491.1	133.7	40.7	91.2	25.1	266.0	147.6	5.6
Buildings and other structures, except land <sup>4</sup>	496.0	7.4	2.5	16.3	1.3	16.4	22.2	.7
Machinery and equipment <sup>4</sup>	4 418.2	111.8	35.5	62.7	23.3	215.3	103.1	4.6
Mineral exploration and development <sup>2</sup>	308.8	9.7	2.4	9.3	(Z)	13.8	12.7	(Z)
Mineral land and rights <sup>2</sup>	267.8	4.7	.3	2.9	.4	20.5	9.5	.3
Gross book value of depreciable assets at end of year <sup>3</sup>	84 285.5	1 850.5	686.2	2 681.6	308.8	3 664.9	2 366.5	92.5
Buildings and other structures, except land <sup>4</sup>	9 313.6	141.3	77.8	482.5	26.4	285.6	334.3	11.0
Machinery and equipment <sup>4</sup>	64 142.5	1 321.9	567.9	1 747.3	272.0	3 027.9	1 695.5	75.5
Mineral exploration and development <sup>2</sup>	5 034.1	271.8	32.6	347.0	.8	182.8	182.7	.8
Mineral land and rights <sup>2</sup>	5 795.4	115.6	7.9	104.7	9.6	168.7	154.0	5.2
Rental payments during year	1 553.7	13.9	26.0	8.4	5.6	81.5	32.4	1.3
Buildings and other structures, except land	417.7	1.3	3.9	.6	1.1	15.3	14.3	.2
Machinery and equipment	1 136.1	12.6	22.1	7.8	4.5	66.3	18.1	1.1
Lease rents	229.8	4.1	(Z)	.8	.1	2.3	3.1	.1
Expensed mineral exploration, development, land, and rights <sup>1</sup>	5 724.6	43.3	259.4	(D)	59.5	606.9	242.8	-
Mineral exploration and development	5 215.6	33.3	254.6	(D)	59.4	592.6	233.3	-
Mineral land and rights	509.0	10.0	4.8	(D)	.1	14.3	9.5	-

  

Item	Delaware and District of Columbia	Florida	Georgia	Hawaii	Idaho	Illinois	Indiana	Iowa	Kansas
Capital expenditures during year (except land and mineral rights)	.8	166.5	122.1	2.8	36.1	208.5	91.7	15.0	192.4
New capital expenditures during year	.6	130.3	110.8	2.0	(D)	123.4	65.2	8.8	71.7
Buildings and other structures, except land	(Z)	8.6	6.6	.2	(D)	15.0	18.2	.9	7.7
Machinery and equipment	.6	121.7	104.2	1.8	(D)	108.4	46.9	7.9	64.0
Used capital expenditures during year	.2	14.6	8.6	.7	1.3	43.8	16.8	5.3	14.7
Buildings and other structures, except land	(Z)	.3	.1	(Z)	.1	.6	.3	.1	.3
Machinery and equipment	.2	14.3	8.5	.7	1.3	43.2	16.4	5.2	14.5
Mineral exploration and development <sup>1</sup>	(Z)	21.7	2.7	(Z)	(D)	41.3	9.7	.8	106.0
Capitalized mineral land and rights <sup>2</sup>	2.2	15.1	7.3	(Z)	.6	19.1	4.0	.7	.6
Deductions from depreciable assets during year <sup>3</sup>	.5	43.0	18.5	4.3	22.7	188.0	59.4	11.2	56.5
Buildings and other structures, except land <sup>4</sup>	(Z)	.8	.3	.1	.2	21.3	.9	.7	2.6
Machinery and equipment <sup>4</sup>	.5	39.5	17.2	3.7	21.9	124.4	51.3	9.4	53.1
Mineral exploration and development <sup>2</sup>	(Z)	.2	.5	(Z)	.2	27.0	3.5	.1	.1
Mineral land and rights <sup>2</sup>	(Z)	2.5	.5	.4	.3	15.3	3.7	1.0	.7
Depreciation and depletion charges for year <sup>3</sup>	.8	127.7	72.7	2.2	24.2	216.5	84.4	15.8	53.3
Buildings and other structures, except land <sup>4</sup>	.1	17.7	4.9	.2	3.8	27.6	2.6	.7	5.0
Machinery and equipment <sup>4</sup>	.4	89.5	63.4	2.0	17.2	159.6	66.0	14.5	47.0
Mineral exploration and development <sup>2</sup>	(Z)	.7	.7	(Z)	1.5	19.7	4.9	.1	.2
Mineral land and rights <sup>2</sup>	.2	19.9	3.7	(Z)	1.7	9.5	10.8	.4	1.1
Gross book value of depreciable assets at end of year <sup>3</sup>	23.0	2 692.5	1 162.2	35.6	884.6	3 004.7	1 119.1	204.8	697.7
Buildings and other structures, except land <sup>4</sup>	2.7	224.8	69.7	2.6	114.8	477.8	59.1	9.8	36.3
Machinery and equipment <sup>4</sup>	13.6	1 657.1	966.0	32.4	462.0	1 938.8	797.9	182.3	650.9
Mineral exploration and development <sup>2</sup>	.2	36.5	10.3	.2	199.0	308.1	58.2	1.2	1.9
Mineral land and rights <sup>2</sup>	6.5	774.1	116.3	.4	108.8	279.9	203.9	11.4	8.5
Rental payments during year	(D)	12.7	5.6	1.0	4.3	17.8	25.4	2.0	11.2
Buildings and other structures, except land	(Z)	.9	.4	(Z)	.1	1.5	1.2	.2	3.6
Machinery and equipment	(D)	11.9	5.3	1.0	4.2	16.3	24.2	1.8	7.6
Lease rents	(Z)	2.4	3.0	-	.1	1.4	10.9	1.0	.5
Expensed mineral exploration, development, land, and rights <sup>1</sup>	(D)	18.2	15.0	(D)	(D)	104.5	33.7	(D)	99.3
Mineral exploration and development	-	15.6	8.2	-	(D)	86.2	21.7	(D)	98.9
Mineral land and rights	(D)	2.6	6.8	(D)	(D)	18.3	12.1	(D)	.4

  

Item	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Capital expenditures during year (except land and mineral rights)	360.4	3 032.0	1.6	42.2	18.9	171.1	24.7	148.6	36.1
New capital expenditures during year	222.1	1 316.8	1.2	33.6	14.4	62.3	20.9	61.0	27.8
Buildings and other structures, except land	18.8	121.0	.1	1.2	3.8	6.0	1.9	3.8	1.6
Machinery and equipment	203.3	1 195.8	1.1	32.4	10.6	56.3	19.0	57.3	26.2
Used capital expenditures during year	94.5	79.6	.4	8.1	3.9	32.5	2.8	4.6	4.9
Buildings and other structures, except land	2.8	5.1	(Z)	(Z)	.9	(D)	(Z)	.4	.1
Machinery and equipment	91.7	74.5	.4	8.1	3.1	(D)	2.8	4.2	4.7
Mineral exploration and development <sup>1</sup>	43.9	1 635.6	.1	.4	.6	76.4	1.1	82.9	3.5
Capitalized mineral land and rights <sup>2</sup>	34.7	.5	.1	.5	1.4	3.7	2.8	.3	6.9
Deductions from depreciable assets during year <sup>3</sup>	273.9	298.9	1.1	29.3	11.4	30.6	48.3	18.3	25.0
Buildings and other structures, except land <sup>4</sup>	11.5	9.2	.1	1.2	3.3	.8	1.0	.8	1.0
Machinery and equipment <sup>4</sup>	246.0	289.4	1.0	26.1	6.7	27.8	46.2	17.3	21.0
Mineral exploration and development <sup>2</sup>	5.3	.1	(Z)	.2	.3	.1	.1	.1	.6
Mineral land and rights <sup>2</sup>	11.1	.2	.1	1.8	1.1	1.9	1.0	.2	2.5

See footnotes at end of table.

**Table 2. Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments for States and Offshore Areas: 1987—Con.**

(Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes)

Item	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Depreciation and depletion charges for year <sup>3</sup> .....	324.0	320.6	.8	28.9	15.9	109.7	116.6	29.4	49.3
Buildings and other structures, except land <sup>4</sup> .....	22.7	14.8	.1	1.1	2.7	26.1	30.3	1.5	5.8
Machinery and equipment <sup>4</sup> .....	265.0	304.1	.7	26.3	12.6	77.0	80.8	27.7	35.1
Mineral exploration and development <sup>2</sup> .....	14.0	.8	(Z)	.5	.1	4.6	1.8	(Z)	4.1
Mineral land and rights <sup>2</sup> .....	22.2	.8	.1	1.0	.6	2.0	3.5	.2	4.3
Gross book value of depreciable assets at end of year <sup>3</sup> .....	4 447.9	4 908.0	13.4	406.7	153.9	1 845.2	3 219.4	407.4	789.7
Buildings and other structures, except land <sup>4</sup> .....	514.0	243.1	1.2	22.1	20.8	163.5	1 203.1	21.7	80.7
Machinery and equipment <sup>4</sup> .....	3 073.7	4 630.2	10.5	338.4	121.0	1 606.2	1 931.4	379.5	515.2
Mineral exploration and development <sup>2</sup> .....	250.8	9.2	.3	14.3	1.5	43.0	31.1	.4	47.2
Mineral land and rights <sup>2</sup> .....	609.4	25.5	1.3	31.8	10.6	32.4	53.8	5.8	146.6
Rental payments during year .....	78.2	214.3	.1	4.5	2.3	19.6	5.6	11.4	3.3
Buildings and other structures, except land .....	12.9	35.5	(Z)	.4	.4	3.2	.2	1.7	.2
Machinery and equipment .....	65.2	178.8	.1	4.2	1.9	16.5	5.4	9.7	3.1
Lease rents .....	74.1	2.9	(Z)	.7	.2	.4	16.3	.1	1.2
Expensed mineral exploration, development, land, and rights <sup>1</sup> .....	92.8	811.8	(D)	(D)	11.7	64.2	34.1	39.4	9.8
Mineral exploration and development .....	19.5	810.7	-	(D)	4.3	58.7	16.2	39.0	1.6
Mineral land and rights .....	73.2	1.1	(D)	(D)	7.3	5.6	17.8	.4	8.1
Item	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota
Capital expenditures during year (except land and mineral rights) .....	118.6	17.2	352.5	3.9	31.2	427.3	62.5	39.3	99.8
New capital expenditures during year .....	59.4	7.8	257.8	2.2	24.7	212.1	40.4	33.8	38.2
Buildings and other structures, except land .....	9.9	.6	23.1	.1	2.7	16.7	3.8	1.6	4.7
Machinery and equipment .....	49.5	7.2	234.7	2.1	22.0	195.4	36.6	32.3	33.6
Used capital expenditures during year .....	8.5	1.7	17.8	1.3	4.8	18.4	7.0	4.9	4.9
Buildings and other structures, except land .....	1.8	.1	1.4	.1	.1	.7	.2	.1	.5
Machinery and equipment .....	6.8	1.7	16.5	1.3	4.7	17.6	6.9	4.8	4.4
Mineral exploration and development <sup>1</sup> .....	50.7	7.7	76.9	.3	1.6	196.9	15.1	.6	56.7
Capitalized mineral land and rights <sup>2</sup> .....	.7	.2	26.3	.2	1.0	7.6	2.9	1.0	1.9
Deductions from depreciable assets during year <sup>3</sup> .....	21.5	5.3	58.6	1.3	18.1	111.9	22.3	22.8	23.3
Buildings and other structures, except land <sup>4</sup> .....	1.1	.4	3.7	(Z)	1.2	8.8	.7	.2	3.1
Machinery and equipment <sup>4</sup> .....	18.6	4.6	36.0	1.1	13.9	100.3	18.1	13.2	19.9
Mineral exploration and development <sup>2</sup> .....	.5	(Z)	16.2	(Z)	.4	2.2	.5	8.6	.1
Mineral land and rights <sup>2</sup> .....	1.3	.2	2.8	.1	2.5	.5	3.0	.8	.3
Depreciation and depletion charges for year <sup>3</sup> .....	68.2	10.6	145.5	2.5	29.8	137.9	33.9	41.8	63.2
Buildings and other structures, except land <sup>4</sup> .....	10.8	.5	23.3	.1	3.2	7.7	4.3	3.4	7.5
Machinery and equipment <sup>4</sup> .....	40.4	9.8	87.6	2.1	25.4	114.5	27.7	37.4	53.3
Mineral exploration and development <sup>2</sup> .....	13.6	(Z)	28.5	(Z)	.5	7.4	.6	(Z)	1.9
Mineral land and rights <sup>2</sup> .....	3.4	.1	6.0	.2	.7	8.3	1.3	1.0	.5
Gross book value of depreciable assets at end of year <sup>3</sup> .....	1 121.6	104.7	1 658.4	38.9	347.1	2 764.4	504.4	596.8	824.4
Buildings and other structures, except land <sup>4</sup> .....	155.5	6.3	207.4	2.1	41.4	209.0	56.6	33.3	112.0
Machinery and equipment <sup>4</sup> .....	798.3	95.3	1 059.0	27.9	270.6	2 040.7	398.4	543.4	654.9
Mineral exploration and development <sup>2</sup> .....	99.5	.7	303.3	.2	12.4	190.2	9.3	.7	34.3
Mineral land and rights <sup>2</sup> .....	68.3	2.4	88.7	8.5	22.7	324.5	40.1	19.4	23.1
Rental payments during year .....	23.8	1.8	8.6	.7	4.7	28.6	8.0	5.6	21.4
Buildings and other structures, except land .....	5.1	.3	1.1	.1	.3	7.1	1.1	.2	3.7
Machinery and equipment .....	18.8	1.5	7.5	.7	4.4	21.6	7.0	5.4	17.7
Lease rents .....	.3	.2	7.9	.1	.2	.6	.7	.8	.3
Expensed mineral exploration, development, land, and rights <sup>1</sup> .....	77.6	11.9	29.2	(D)	(D)	138.3	9.2	2.6	54.5
Mineral exploration and development .....	74.5	11.7	26.8	(D)	(D)	131.9	8.8	1.3	49.4
Mineral land and rights .....	3.1	.2	2.4	(D)	(D)	6.4	.4	1.3	5.1
Item	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	
Capital expenditures during year (except land and mineral rights) .....	231.1	841.8	10.2	281.2	2.0	49.7	29.1	60.4	
New capital expenditures during year .....	150.3	286.1	7.4	173.3	1.8	41.8	26.8	33.7	
Buildings and other structures, except land .....	17.4	24.3	1.0	13.6	.2	15.1	6.5	2.0	
Machinery and equipment .....	132.9	261.8	6.4	159.8	1.6	26.8	20.3	31.7	
Used capital expenditures during year .....	28.3	42.0	2.0	45.5	.1	2.4	.4	9.9	
Buildings and other structures, except land .....	.8	3.1	.1	1.8	(Z)	.2	(Z)	.2	
Machinery and equipment .....	27.5	38.8	1.9	43.7	.1	2.3	.4	9.7	
Mineral exploration and development <sup>1</sup> .....	52.5	513.7	.7	62.4	(Z)	5.5	1.9	16.8	
Capitalized mineral land and rights <sup>2</sup> .....	16.9	1.1	1.6	11.3	(Z)	4.5	.3	.7	
Deductions from depreciable assets during year <sup>3</sup> .....	193.2	161.5	8.9	103.6	.4	11.0	2.1	17.2	
Buildings and other structures, except land <sup>4</sup> .....	6.5	8.6	.4	3.8	(Z)	.3	(Z)	.4	
Machinery and equipment <sup>4</sup> .....	146.9	151.9	5.8	94.1	.3	9.7	1.9	15.3	
Mineral exploration and development <sup>2</sup> .....	30.6	.2	1.7	1.5	(Z)	.4	.1	.5	
Mineral land and rights <sup>2</sup> .....	9.2	.8	1.1	4.2	.1	.5	.1	1.1	
Depreciation and depletion charges for year <sup>3</sup> .....	146.8	235.6	8.4	256.9	1.7	16.0	11.2	45.7	
Buildings and other structures, except land <sup>4</sup> .....	23.5	11.3	.7	14.6	.2	1.2	1.2	2.3	
Machinery and equipment <sup>4</sup> .....	107.9	219.7	7.4	201.0	1.4	11.8	9.6	38.8	
Mineral exploration and development <sup>2</sup> .....	7.2	.4	.1	24.3	(Z)	1.0	.1	1.3	
Mineral land and rights <sup>2</sup> .....	8.2	4.3	.2	17.0	.1	2.0	.2	3.4	
Gross book value of depreciable assets at end of year <sup>3</sup> .....	2 077.8	2 941.5	122.1	3 581.7	18.0	205.5	212.2	538.2	
Buildings and other structures, except land <sup>4</sup> .....	427.4	128.3	11.7	329.2	1.6	24.0	18.5	35.5	
Machinery and equipment <sup>4</sup> .....	1 299.2	2 777.3	99.9	2 689.7	15.6	147.0	184.6	428.8	
Mineral exploration and development <sup>2</sup> .....	174.4	3.2	3.8	256.3	.1	15.3	2.4	17.1	
Mineral land and rights <sup>2</sup> .....	176.8	32.7	6.8	306.5	.8	19.2	6.7	56.8	
Rental payments during year .....	61.5	83.6	2.5	59.1	.6	1.0	2.1	4.7	
Buildings and other structures, except land .....	21.8	35.3	.3	18.5	.1	(Z)	.1	.7	
Machinery and equipment .....	39.7	48.3	2.2	40.6	.5	1.0	2.0	3.9	
Lease rents .....	9.7	1.9	.3	10.5	(Z)	.9	.2	1.0	
Expensed mineral exploration, development, land, and rights <sup>1</sup> .....	42.7	394.7	(D)	54.7	(D)	1.5	1.4	13.1	
Mineral exploration and development .....	26.1	390.8	(D)	37.7	(D)	.4	1.0	8.9	
Mineral land and rights .....	16.6	3.9	-	17.0	-	1.1	.4	4.2	

See footnotes at end of table.



**Table 2. Gross Assets, Retirements, Capital Expenditures, Depreciation, and Rental Payments for States and Offshore Areas: 1987—Con.**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Texas	Utah	Vermont	Virginia	Washing- ton	West Virginia	Wisconsin	Wyoming	Offshore areas
Capital expenditures during year (except land and mineral rights) -----	3 825.8	182.7	7.7	202.1	32.3	450.4	24.4	575.9	109.6
New capital expenditures during year -----	1 461.7	75.0	7.1	140.4	18.0	222.3	16.9	297.2	(D)
Buildings and other structures, except land -----	130.0	4.8	.2	10.1	1.8	23.1	1.7	24.7	(D)
Machinery and equipment -----	1 331.6	70.2	6.9	130.3	16.1	199.3	15.2	272.5	(D)
Used capital expenditures during year -----	154.8	14.3	.5	40.7	3.5	169.0	6.5	41.7	21.4
Buildings and other structures, except land -----	8.9	4.7	(Z)	.3	.5	52.2	(D)	2.1	.1
Machinery and equipment -----	145.9	9.5	.5	40.4	3.0	116.8	(D)	39.6	21.3
Mineral exploration and development <sup>1</sup> -----	2 209.3	93.4	.1	21.0	10.8	59.1	1.0	236.9	(D)
Capitalized mineral land and rights <sup>2</sup> -----	3.5	5.8	.3	7.6	1.6	22.5	.9	33.5	-
Deductions from depreciable assets during year <sup>3</sup> -----	784.8	141.9	3.8	126.8	16.2	213.8	14.6	132.0	37.5
Buildings and other structures, except land <sup>4</sup> -----	54.0	4.6	.2	10.6	.6	10.6	.5	13.9	1.5
Machinery and equipment <sup>4</sup> -----	643.7	86.1	3.3	106.6	14.6	174.8	13.1	91.1	36.0
Mineral exploration and development <sup>2</sup> -----	78.0	37.0	.1	6.0	.2	26.0	.3	20.9	-
Mineral land and rights <sup>2</sup> -----	9.2	14.2	.2	3.5	.9	2.3	.7	6.1	-
Depreciation and depletion charges for year <sup>3</sup> -----	847.1	95.2	8.9	150.5	38.6	342.2	14.8	349.1	86.2
Buildings and other structures, except land <sup>4</sup> -----	47.3	6.5	.9	9.2	1.4	51.7	.7	27.3	.7
Machinery and equipment <sup>4</sup> -----	783.8	76.1	7.7	129.6	25.3	251.5	13.5	204.2	85.5
Mineral exploration and development <sup>2</sup> -----	10.1	6.0	.1	6.8	7.5	23.3	.1	66.1	-
Mineral land and rights <sup>2</sup> -----	6.0	6.6	.2	4.8	4.5	15.7	.6	51.5	-
Gross book value of depreciable assets at end of year <sup>3</sup> -----	12 256.4	1 861.5	127.1	2 249.0	556.2	4 773.9	214.0	5 645.9	1 276.8
Buildings and other structures, except land <sup>4</sup> -----	696.9	166.5	20.2	261.8	23.9	826.1	17.2	861.1	13.4
Machinery and equipment <sup>4</sup> -----	11 308.3	1 124.6	97.1	1 656.6	337.0	3 098.0	163.3	3 548.3	1 263.4
Mineral exploration and development <sup>2</sup> -----	130.4	156.5	2.1	191.8	90.6	464.4	9.6	833.4	-
Mineral land and rights <sup>2</sup> -----	120.8	413.8	7.8	138.9	104.7	385.4	23.9	403.0	-
Rental payments during year -----	432.3	10.0	.6	31.8	3.6	84.8	2.4	40.5	(D)
Buildings and other structures, except land -----	203.7	1.4	(Z)	2.1	.6	6.7	.3	5.3	2.8
Machinery and equipment -----	228.6	8.6	.6	29.7	2.9	78.2	2.1	35.1	(D)
Lease rents -----	3.5	.5	.1	18.4	.4	44.5	.4	.9	-
Expensed mineral exploration, development, land, and rights <sup>1</sup> -----	1 612.6	57.8	(D)	32.0	12.3	106.5	1.6	278.4	(D)
Mineral exploration and development -----	1 604.4	43.3	(D)	15.2	5.4	19.5	1.5	237.0	(D)
Mineral land and rights -----	8.2	14.5	-	16.8	6.9	87.1	.1	41.4	-

<sup>1</sup>Excludes data for mining service industries and natural gas liquids industry.

<sup>2</sup>Excludes data for mining service industries and oil and gas extraction industries.

<sup>3</sup>Excludes data for crude petroleum and natural gas industry. Data for mineral exploration and development, and mineral land and rights portions are excluded for mining service industries and natural gas liquids industry.

<sup>4</sup>Excludes data for crude petroleum and natural gas industry.

**Table 3. Number of Mineral Establishments by Employment-Size Class for States and Offshore Areas: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area	Estab- lishments during year	Establishments during year with an average employment-size class of—										Estab- lishments during year covered by admin- istrative records
		0 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 or more	
United States -----	33 617	16 950	5 665	4 703	3 755	1 307	785	290	115	44	3	12 485
Alabama -----	350	130	60	61	55	17	18	4	5	-	-	73
Alaska -----	175	87	18	23	18	14	11	-	2	2	-	38
Arizona -----	244	109	45	37	29	9	4	3	6	1	1	73
Arkansas -----	416	241	72	60	31	6	6	-	-	-	-	145
California -----	1 387	599	250	188	198	71	47	23	6	5	-	403
Colorado -----	1 309	749	216	142	112	48	29	9	4	-	-	442
Connecticut -----	87	38	13	12	18	4	2	-	-	-	-	24
Delaware and the District of Columbia -----	27	16	2	5	2	-	2	-	-	-	-	4
Florida -----	343	160	58	47	38	20	14	3	2	1	-	121
Georgia -----	216	71	34	28	43	21	13	5	1	-	-	59
Hawaii -----	9	2	1	2	3	1	-	-	-	-	-	2
Idaho -----	109	51	24	11	12	4	5	2	-	-	-	39
Illinois -----	977	505	167	143	86	29	23	19	5	-	-	418
Indiana -----	472	208	103	83	58	6	8	6	-	-	-	149
Iowa -----	200	96	39	34	24	5	2	-	-	-	-	38
Kansas -----	1 309	805	207	151	111	25	8	1	-	1	-	613
Kentucky -----	1 460	511	221	314	264	69	56	19	5	1	-	572
Louisiana -----	1 963	957	322	259	240	76	72	23	10	4	-	605
Maine -----	34	25	5	3	1	-	-	-	-	-	-	17
Maryland -----	129	43	23	20	25	13	4	1	-	-	-	38
Massachusetts -----	108	37	22	31	13	3	1	-	1	-	-	22
Michigan -----	543	301	84	72	46	26	10	1	2	1	-	197
Minnesota -----	161	76	29	28	16	4	2	1	4	1	-	58
Mississippi -----	525	305	76	73	49	18	4	-	-	-	-	182
Missouri -----	326	141	63	57	41	13	10	1	-	-	-	97
Montana -----	398	251	55	32	37	9	10	4	-	-	-	147
Nebraska -----	228	148	37	26	11	6	-	-	-	-	-	82
Nevada -----	264	112	47	31	37	17	15	4	1	-	-	64
New Hampshire -----	53	28	8	8	8	1	-	-	-	-	-	18
New Jersey -----	154	62	25	23	26	11	5	-	2	-	-	47

See footnotes at end of table.

**Table 3. Number of Mineral Establishments by Employment-Size Class for States and Offshore Areas: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area	Estab- lishments during year	Establishments during year with an average employment-size class of—										Estab- lishments during year covered by admin- istrative records
		0 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 or more	
<b>United States—Con.</b>												
New Mexico.....	752	392	118	92	93	29	18	7	3	—	—	234
New York.....	466	214	89	86	51	14	6	3	2	1	—	140
North Carolina.....	191	60	30	26	61	7	6	1	—	—	—	58
North Dakota.....	326	179	65	38	24	12	7	1	—	—	—	82
Ohio.....	1 240	585	246	210	122	49	20	6	1	1	—	475
Oklahoma.....	2 981	1 803	488	332	209	81	48	12	4	2	2	1 387
Oregon.....	172	89	39	28	14	1	1	—	—	—	—	67
Pennsylvania.....	1 382	549	288	231	167	77	44	21	5	—	—	580
Rhode Island.....	16	3	5	4	4	—	—	—	—	—	—	3
South Carolina.....	85	24	11	20	24	5	1	—	—	—	—	8
South Dakota.....	84	57	7	10	4	4	1	—	—	1	—	19
Tennessee.....	341	116	47	86	63	19	7	3	—	—	—	115
Texas.....	8 021	4 499	1 302	969	730	280	132	60	29	20	—	3 317
Utah.....	380	213	56	43	35	12	17	3	1	—	—	116
Vermont.....	45	23	9	4	4	4	1	—	—	—	—	21
Virginia.....	723	179	121	171	179	42	20	10	—	1	—	205
Washington.....	189	95	37	37	13	3	3	—	1	—	—	65
West Virginia.....	1 259	514	198	197	196	77	49	19	9	—	—	499
Wisconsin.....	169	74	42	26	21	5	1	—	—	—	—	54
Wyoming.....	774	404	140	88	75	35	17	11	3	1	—	253
Offshore areas not associated with a particular State:												
Atlantic Offshore.....	7	5	—	—	1	1	—	—	—	—	—	—
Northern Gulf of Mexico Offshore.....	32	5	1	1	11	4	5	4	1	—	—	—
Pacific Offshore.....	6	4	—	—	2	—	—	—	—	—	—	—

**Table 4. Employment at Auxiliaries and Related Facilities for Selected States: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area	1987		1982		Geographic area	1987		1982	
	Number of employees (1,000)	Payroll (million dollars)	Number of employees (1,000)	Payroll (million dollars)		Number of employees (1,000)	Payroll (million dollars)	Number of employees (1,000)	Payroll (million dollars)
<b>United States</b> .....	<b>115.9</b>	<b>4 856.8</b>	<b>139.8</b>	<b>4 698.2</b>	<b>United States—Con.</b>				
Alabama.....	(D)	(D)	.5	17.8	Montana.....	(D)	(D)	.1	1.0
Alaska.....	(D)	(D)	(D)	(D)	Nebraska.....	.3	8.4	.4	6.3
Arizona.....	.7	29.8	1.0	29.7	Nevada.....	.1	5.2	.4	11.4
Arkansas.....	.3	12.0	.1	4.1	New Hampshire.....	(D)	(D)	(D)	(D)
California.....	10.6	390.4	11.4	427.7	New Jersey.....	(D)	(D)	1.4	58.1
Colorado.....	7.4	329.8	11.7	426.9	New Mexico.....	(D)	(D)	.4	11.2
Connecticut.....	.8	31.1	1.2	52.6	New York.....	(D)	(D)	2.3	87.1
Delaware and District of Columbia.....	(D)	(D)	(D)	(D)	North Carolina.....	.5	16.3	(D)	(D)
Florida.....	.2	7.3	.1	3.8	North Dakota.....	(D)	(D)	.1	3.8
Georgia.....	.4	14.0	(D)	(D)	Ohio.....	(D)	(D)	2.1	73.6
Idaho.....	(D)	(D)	(D)	(D)	Oklahoma.....	16.6	649.9	23.4	777.6
Illinois.....	2.1	78.4	3.1	97.8	Oregon.....	(D)	(D)	(D)	(D)
Indiana.....	(D)	(D)	1.0	31.0	Pennsylvania.....	4.0	124.5	4.6	135.6
Iowa.....	.3	11.6	.2	4.1	South Carolina.....	(D)	(D)	.1	1.9
Kansas.....	1.5	54.1	1.9	74.9	South Dakota.....	(D)	(D)	(D)	(D)
Kentucky.....	3.5	121.2	1.4	33.8	Tennessee.....	.8	24.0	.3	8.3
Louisiana.....	7.5	336.0	11.5	389.4	Texas.....	40.8	1 829.9	49.9	1 632.4
Maine.....	(D)	(D)	(D)	(D)	Utah.....	(D)	(D)	.5	15.5
Maryland.....	(D)	(D)	(D)	(D)	Vermont.....	(D)	(D)	(D)	(D)
Massachusetts.....	(D)	(D)	(D)	(D)	Virginia.....	1.4	47.5	1.3	41.3
Michigan.....	(D)	(D)	.8	23.1	Washington.....	(D)	(D)	.1	2.4
Minnesota.....	.3	12.9	.4	13.9	West Virginia.....	1.2	43.8	2.0	51.5
Mississippi.....	(D)	(D)	(D)	(D)	Wisconsin.....	.1	1.5	(D)	(D)
Missouri.....	.7	30.9	1.3	41.1	Wyoming.....	(D)	(D)	.6	18.4

Note: Figures in this table represent auxiliary establishments at different locations from establishments managed or served, or at same location as one of these establishments but not operated as an integral part of it.



**Table 5. Selected Statistics by Type of Operation for States and Offshore Areas: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area and item	All types of operations	Producing establishments										Non-producing establishments	
		Mines only					Mines with preparation plants						
		Total	Total	Underground mines	Open pit mines	Combination methods, well operations, and other methods	Total	Underground mines	Open pit mines	Combination and other methods	Separately operated preparation plants		Undistributed <sup>1</sup>
UNITED STATES													
Establishments.....number..	33 617	32 947	12 356	1 401	1 597	9 358	4 208	401	3 627	180	816	15 567	670
Employees.....1,000.....	698.1	692.7	174.3	34.4	23.2	116.7	208.1	68.3	125.0	14.8	16.6	293.6	5.5
Value added by mining.....mil dol..	110 959.1	111 053.4	73 287.3	2 668.9	2 152.5	68 465.9	23 450.0	7 391.4	14 647.5	1 411.1	4 869.1	9 446.9	-94.2
Alabama													
Establishments.....number..	350	344	111	2	67	42	84	10	73	1	6	143	6
Employees.....1,000.....	11.1	(D)	2.0	(D)	1.2	(D)	6.8	(D)	2.5	(D)	.2	(D)	(D)
Value added by mining.....mil dol..	1 234.7	(D)	527.4	(D)	98.9	(D)	627.1	(D)	186.3	(D)	36.9	(D)	(D)
Alaska													
Establishments.....number..	175	157	19	1	2	16	7	-	7	-	2	129	18
Employees.....1,000.....	7.4	(D)	(D)	(D)	(D)	(D)	(D)	-	(D)	-	(D)	(D)	(D)
Value added by mining.....mil dol..	8 018.8	(D)	(D)	(D)	(D)	(D)	(D)	-	(D)	-	(D)	(D)	(D)
Arizona													
Establishments.....number..	244	230	39	3	16	20	58	4	51	3	3	130	14
Employees.....1,000.....	12.8	12.6	(D)	(D)	(D)	(D)	10.6	(D)	(D)	(D)	(D)	1.6	.2
Value added by mining.....mil dol..	1 142.8	1 146.4	(D)	(D)	(D)	(D)	1 052.0	(D)	(D)	(D)	(D)	44.7	-3.6
Arkansas													
Establishments.....number..	416	412	164	1	14	149	44	-	41	3	8	196	4
Employees.....1,000.....	4.0	(D)	1.2	-	(D)	(D)	.9	-	(D)	(D)	(D)	1.7	(D)
Value added by mining.....mil dol..	521.3	(D)	399.5	(D)	(D)	(D)	43.0	-	(D)	(D)	(D)	64.7	(D)
California													
Establishments.....number..	1 387	1 366	356	4	27	325	230	5	212	13	42	738	21
Employees.....1,000.....	44.1	43.8	10.0	(D)	(D)	9.8	8.5	(D)	7.2	(D)	.7	24.7	.3
Value added by mining.....mil dol..	6 484.2	6 483.7	4 442.3	(D)	(D)	4 432.1	1 140.2	(D)	1 034.0	(D)	79.1	822.2	.4
Colorado													
Establishments.....number..	1 309	1 260	481	20	24	437	86	18	68	-	24	669	49
Employees.....1,000.....	21.7	21.2	5.7	.3	.4	5.0	3.6	2.3	1.4	-	.3	11.6	.4
Value added by mining.....mil dol..	1 832.1	1 840.7	1 244.1	38.6	39.7	1 165.9	320.1	209.3	110.8	-	(D)	(D)	-8.6
Connecticut													
Establishments.....number..	87	87	11	-	4	7	21	-	20	1	1	54	-
Employees.....1,000.....	1.5	1.5	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)	1.1	-
Value added by mining.....mil dol..	105.6	105.6	(D)	-	(D)	-	(D)	-	(D)	(D)	(D)	32.0	-
Delaware and District of Columbia													
Establishments.....number..	27	26	2	-	2	-	4	-	3	1	-	20	1
Employees.....1,000.....	.5	(D)	(D)	-	(D)	-	(D)	-	(Z)	(D)	-	.4	(D)
Value added by mining.....mil dol..	11.4	(D)	(D)	-	(D)	-	(D)	-	.1	(D)	-	11.0	(D)
Florida													
Establishments.....number..	343	333	54	-	10	44	130	-	125	5	4	145	10
Employees.....1,000.....	9.6	(D)	(D)	-	.1	(D)	7.8	-	7.6	.1	.3	1.2	(D)
Value added by mining.....mil dol..	1 027.4	(D)	(D)	-	6.7	(D)	717.4	-	705.8	11.6	28.4	56.0	(D)
Georgia													
Establishments.....number..	216	213	44	-	31	13	100	2	96	2	1	68	3
Employees.....1,000.....	8.1	8.1	.4	-	(D)	(D)	(D)	(D)	6.5	(D)	(D)	.8	(Z)
Value added by mining.....mil dol..	827.6	827.6	31.4	-	(D)	(D)	(D)	(D)	738.2	(D)	(D)	27.9	(Z)
Hawaii													
Establishments.....number..	9	9	-	-	-	-	8	-	8	-	-	1	-
Employees.....1,000.....	.2	.2	-	-	-	-	(D)	-	(D)	-	-	(D)	-
Value added by mining.....mil dol..	23.5	23.5	-	-	-	-	(D)	-	(D)	-	-	(D)	-
Idaho													
Establishments.....number..	109	99	23	12	10	1	24	4	20	-	2	50	10
Employees.....1,000.....	2.4	2.3	.5	(D)	(D)	-	1.3	(D)	(D)	-	(D)	(D)	.1
Value added by mining.....mil dol..	171.3	171.5	53.4	(D)	(D)	-	87.6	(D)	(D)	-	(D)	(D)	-2
Illinois													
Establishments.....number..	977	964	357	14	19	324	206	26	174	6	9	392	13
Employees.....1,000.....	22.5	22.4	(D)	(D)	.4	2.1	13.9	(D)	5.5	(D)	(D)	4.2	.1
Value added by mining.....mil dol..	2 180.5	2 182.6	(D)	(D)	33.5	318.0	1 511.6	(D)	699.0	(D)	(D)	102.5	-2.0
Indiana													
Establishments.....number..	472	464	144	1	42	101	145	6	138	1	5	170	8
Employees.....1,000.....	7.7	7.6	1.0	(D)	(D)	.4	5.2	(D)	5.1	(D)	(D)	(D)	(Z)
Value added by mining.....mil dol..	815.4	816.7	138.9	(D)	(D)	63.1	637.5	(D)	618.5	(D)	(D)	(D)	-1.2
Iowa													
Establishments.....number..	200	197	12	-	10	2	136	6	127	3	2	47	3
Employees.....1,000.....	2.4	(D)	.1	-	(D)	(D)	1.8	(D)	1.7	(D)	(D)	.5	(D)
Value added by mining.....mil dol..	131.3	(D)	9.5	-	(D)	(D)	117.5	(D)	108.0	(D)	(D)	7.4	(D)
Kansas													
Establishments.....number..	1 309	1 301	585	-	14	571	71	5	61	5	18	627	8
Employees.....1,000.....	12.5	(D)	4.9	-	(D)	(D)	1.1	(D)	.8	(D)	(D)	6.2	(D)
Value added by mining.....mil dol..	1 671.7	(D)	1 265.7	-	(D)	(D)	69.8	(D)	46.1	(D)	(D)	208.6	(D)

See footnotes at end of table.

Table 5. Selected Statistics by Type of Operation for States and Offshore Areas: 1987—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area and item	All types of operations	Producing establishments											Non-producing establishments
		Mines only					Mines with preparation plants				Separately operated preparation plants	Undistributed <sup>1</sup>	
		Total	Underground mines	Open pit mines	Combination methods, well operations, and other methods	Total	Underground mines	Open pit mines	Combination and other methods				
<b>UNITED STATES—Con.</b>													
<b>Kentucky</b>													
Establishments.....number.....	1 460	1 434	944	456	302	186	216	88	113	15	25	249	26
Employees.....1,000.....	39.5	(D)	17.6	10.4	5.6	1.6	15.8	9.9	5.1	.8	(D)	5.0	(D)
Value added by mining.....mil dol.....	3 698.6	(D)	1 530.9	708.5	537.9	284.5	1 972.1	1 193.1	649.8	129.1	(D)	94.0	(D)
<b>Louisiana</b>													
Establishments.....number.....	1 963	1 927	536	-	4	532	42	3	36	3	68	1 281	36
Employees.....1,000.....	50.7	(D)	16.8	-	(D)	(D)	1.6	(D)	.7	(D)	(D)	30.9	(D)
Value added by mining.....mil dol.....	16 655.7	(D)	14 497.2	-	(D)	(D)	137.1	(D)	67.2	(D)	(D)	1 276.9	(D)
<b>Maine</b>													
Establishments.....number.....	34	32	2	-	2	-	9	-	9	-	-	21	2
Employees.....1,000.....	.2	(D)	(D)	-	(D)	-	(D)	-	(D)	-	-	.1	(D)
Value added by mining.....mil dol.....	5.5	(D)	(D)	-	(D)	-	(D)	-	(D)	-	-	2.9	(D)
<b>Maryland</b>													
Establishments.....number.....	129	127	33	1	27	5	53	2	51	-	-	41	2
Employees.....1,000.....	2.9	(D)	.2	(D)	.2	(D)	(D)	(D)	1.8	-	-	.6	(D)
Value added by mining.....mil dol.....	273.9	(D)	16.8	(D)	15.9	(D)	(D)	(D)	180.8	-	-	30.0	(D)
<b>Massachusetts</b>													
Establishments.....number.....	108	106	11	-	8	3	43	-	43	-	4	48	2
Employees.....1,000.....	1.8	1.8	.1	-	(D)	(D)	(D)	-	(D)	-	(D)	1.0	(Z)
Value added by mining.....mil dol.....	132.0	132.0	3.7	-	(D)	(D)	(D)	-	(D)	-	(D)	39.1	(Z)
<b>Michigan</b>													
Establishments.....number.....	543	535	142	-	12	130	100	2	97	1	10	283	8
Employees.....1,000.....	9.8	(D)	1.3	-	(D)	(D)	(D)	(D)	3.8	(D)	.2	(D)	(D)
Value added by mining.....mil dol.....	1 499.6	(D)	797.2	-	(D)	(D)	(D)	(D)	449.2	(D)	56.1	(D)	(D)
<b>Minnesota</b>													
Establishments.....number.....	161	158	16	-	8	8	60	-	59	1	-	82	3
Employees.....1,000.....	6.1	(D)	.1	-	(D)	(D)	(D)	-	5.3	(D)	-	.7	(D)
Value added by mining.....mil dol.....	554.5	(D)	6.6	-	1.9	4.7	(D)	-	525.3	(D)	-	22.0	(D)
<b>Mississippi</b>													
Establishments.....number.....	525	513	161	-	4	157	28	-	26	2	5	319	12
Employees.....1,000.....	5.3	5.2	1.1	-	(D)	(D)	(D)	-	(D)	(D)	(D)	3.4	.1
Value added by mining.....mil dol.....	930.8	932.9	710.2	-	(D)	(D)	(D)	-	(D)	(D)	(D)	155.3	-1.9
<b>Missouri</b>													
Establishments.....number.....	326	320	50	1	25	24	186	11	164	11	1	83	6
Employees.....1,000.....	5.6	(D)	(D)	(D)	.3	.1	4.2	1.0	2.7	.6	(D)	1.0	(D)
Value added by mining.....mil dol.....	466.1	(D)	(D)	(D)	11.7	14.7	423.5	142.9	204.8	75.9	(D)	14.9	(D)
<b>Montana</b>													
Establishments.....number.....	398	391	137	5	10	122	29	4	25	-	4	221	7
Employees.....1,000.....	5.7	(D)	1.1	(D)	(D)	.9	2.9	.7	2.2	-	(Z)	(D)	(D)
Value added by mining.....mil dol.....	1 167.1	(D)	436.1	(D)	8.4	(D)	643.6	(D)	(D)	-	6.4	(D)	(D)
<b>Nebraska</b>													
Establishments.....number.....	228	223	60	-	3	57	36	1	26	9	3	124	5
Employees.....1,000.....	1.6	1.6	.2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	-
Value added by mining.....mil dol.....	119.0	(D)	58.2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	28.9	(D)
<b>Nevada</b>													
Establishments.....number.....	264	223	33	7	11	15	66	2	61	3	-	124	41
Employees.....1,000.....	7.6	7.0	.1	(D)	(Z)	(D)	5.4	(D)	(D)	(D)	-	1.5	.6
Value added by mining.....mil dol.....	1 177.5	1 196.2	46.2	(D)	4.1	(D)	1 045.5	(D)	(D)	(D)	-	104.5	-18.7
<b>New Hampshire</b>													
Establishments.....number.....	53	53	4	-	2	2	15	-	14	1	1	33	-
Employees.....1,000.....	.5	.5	(D)	-	(D)	(D)	(D)	-	.3	(D)	(D)	.1	-
Value added by mining.....mil dol.....	40.9	40.9	(D)	-	(D)	(D)	(D)	-	26.4	(D)	(D)	8.6	-
<b>New Jersey</b>													
Establishments.....number.....	154	154	15	-	4	11	64	-	62	2	1	74	-
Employees.....1,000.....	4.2	4.2	(D)	-	(D)	(D)	1.9	-	(D)	(D)	(D)	(D)	-
Value added by mining.....mil dol.....	241.2	241.2	(D)	-	(D)	-	193.1	-	(D)	(D)	(D)	(D)	-
<b>New Mexico</b>													
Establishments.....number.....	752	737	266	11	15	240	36	5	29	2	26	409	15
Employees.....1,000.....	14.8	14.5	3.5	(D)	(D)	2.5	(D)	1.5	2.5	(D)	(D)	6.1	.3
Value added by mining.....mil dol.....	3 539.1	3 545.9	2 353.5	(D)	(D)	2 272.7	(D)	112.1	541.2	(D)	(D)	229.5	-6.7
<b>New York</b>													
Establishments.....number.....	466	457	101	3	10	88	132	3	127	2	3	221	9
Employees.....1,000.....	8.8	8.8	.7	(D)	(D)	.5	3.1	(D)	2.5	(D)	(D)	(D)	(Z)
Value added by mining.....mil dol.....	484.3	484.3	139.4	(D)	(D)	127.9	271.1	(D)	197.2	(D)	(D)	(D)	(Z)

See footnotes at end of table.



Table 5. Selected Statistics by Type of Operation for States and Offshore Areas: 1987—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area and item	All types of operations	Producing establishments										Non-producing establishments	
										Separately operated preparation plants	Undistributed <sup>1</sup>		
		Mines only				Mines with preparation plants							
		Total	Total	Underground mines	Open pit mines	Combination methods, well operations, and other methods	Total	Underground mines	Open pit mines				Combination and other methods
<b>UNITED STATES—Con.</b>													
<b>North Carolina</b>													
Establishments.....number..	191	188	13	-	12	1	101	-	101	-	-	74	3
Employees.....1,000.....	4.0	(D)	(D)	-	(D)	(D)	3.1	-	3.1	-	-	.8	(D)
Value added by mining.....mil dol..	414.2	(D)	(D)	-	(D)	(D)	390.2	-	390.2	-	-	13.5	(D)
<b>North Dakota</b>													
Establishments.....number..	326	319	100	-	6	94	16	-	16	-	9	194	7
Employees.....1,000.....	4.0	(D)	.8	-	(D)	(D)	1.0	-	1.0	-	(D)	(D)	(D)
Value added by mining.....mil dol..	978.1	(D)	671.9	-	(D)	(D)	142.3	-	142.3	-	(D)	(D)	(D)
<b>Ohio</b>													
Establishments.....number..	1 240	1 221	447	7	109	331	249	13	224	12	8	517	19
Employees.....1,000.....	19.0	18.9	4.4	(D)	(D)	2.7	9.3	3.3	4.4	1.6	(D)	(D)	.1
Value added by mining.....mil dol..	1 839.8	1 841.6	657.6	(D)	(D)	488.5	886.5	340.6	344.3	201.6	(D)	(D)	-1.6
<b>Oklahoma</b>													
Establishments.....number..	2 981	2 941	1 258	-	22	1 236	76	-	65	11	96	1 511	40
Employees.....1,000.....	46.0	45.7	(D)	-	.2	(D)	1.8	-	1.7	.1	(D)	31.8	.2
Value added by mining.....mil dol..	5 523.1	5 524.0	(D)	-	9.2	(D)	122.8	-	117.0	5.8	(D)	715.9	-8
<b>Oregon</b>													
Establishments.....number..	172	168	13	-	4	9	75	1	74	-	2	78	4
Employees.....1,000.....	1.4	1.4	(Z)	-	(Z)	(Z)	.7	(Z)	.7	-	(Z)	.6	(Z)
Value added by mining.....mil dol..	78.5	(D)	9.1	-	(D)	(D)	46.4	(D)	(D)	-	(D)	22.3	(D)
<b>Pennsylvania</b>													
Establishments.....number..	1 382	1 359	641	124	327	190	272	29	222	21	25	421	23
Employees.....1,000.....	33.4	33.3	10.9	4.8	3.8	2.3	13.8	6.7	6.0	1.1	.8	7.7	.1
Value added by mining.....mil dol..	2 561.6	2 565.6	1 041.6	389.2	316.0	336.3	1 262.5	649.6	538.1	74.9	72.9	188.6	-4.0
<b>Rhode Island</b>													
Establishments.....number..	16	16	-	-	-	-	10	-	10	-	1	5	-
Employees.....1,000.....	.2	.2	-	-	-	-	.1	-	.1	-	(D)	(D)	-
Value added by mining.....mil dol..	15.6	15.6	-	-	-	-	12.9	-	12.9	-	(D)	(D)	-
<b>South Carolina</b>													
Establishments.....number..	85	81	6	-	5	1	45	-	45	-	-	30	4
Employees.....1,000.....	1.5	(D)	(Z)	-	(Z)	-	1.3	-	1.3	-	-	(D)	(D)
Value added by mining.....mil dol..	143.1	(D)	1.6	-	(D)	(D)	129.5	-	129.5	-	-	(D)	(D)
<b>South Dakota</b>													
Establishments.....number..	84	80	16	-	7	9	16	-	15	1	-	48	4
Employees.....1,000.....	2.1	(D)	.2	-	(D)	(D)	1.6	-	(D)	(D)	-	(D)	(D)
Value added by mining.....mil dol..	190.8	(D)	28.5	-	(D)	(D)	145.7	-	(D)	(D)	-	(D)	(D)
<b>Tennessee</b>													
Establishments.....number..	341	338	126	55	41	30	130	12	111	7	3	79	3
Employees.....1,000.....	6.5	6.5	1.7	1.0	.5	.1	3.6	1.1	2.3	.3	.1	1.2	(Z)
Value added by mining.....mil dol..	458.4	458.4	156.7	62.5	42.0	52.2	274.7	65.5	191.6	17.7	4.6	22.4	(Z)
<b>Texas</b>													
Establishments.....number..	8 021	7 889	3 286	5	39	3 242	171	2	162	7	297	4 135	132
Employees.....1,000.....	158.0	157.3	42.8	(D)	(D)	42.4	7.6	(D)	7.3	(D)	5.1	101.7	.8
Value added by mining.....mil dol..	29 676.5	29 685.6	24 271.9	(D)	(D)	24 213.6	585.9	(D)	551.3	(D)	1 722.6	3 105.2	-9.1
<b>Utah</b>													
Establishments.....number..	380	369	109	9	15	85	43	18	21	4	12	205	11
Employees.....1,000.....	7.9	7.9	1.7	(D)	(D)	.9	3.8	2.8	(D)	(D)	(D)	(D)	(Z)
Value added by mining.....mil dol..	1 552.0	1 553.3	831.1	(D)	(D)	772.2	425.3	318.1	(D)	(D)	(D)	(D)	-1.4
<b>Vermont</b>													
Establishments.....number..	45	44	7	-	7	-	17	-	16	1	-	20	1
Employees.....1,000.....	.7	.7	(D)	-	(D)	-	.4	-	(D)	(D)	-	(D)	(Z)
Value added by mining.....mil dol..	57.8	57.8	(D)	-	(D)	-	37.8	-	(D)	(D)	-	(D)	(Z)
<b>Virginia</b>													
Establishments.....number..	723	712	430	320	87	23	141	28	110	3	11	130	11
Employees.....1,000.....	18.8	18.7	7.7	6.4	1.2	.2	8.0	4.8	3.1	.2	.6	2.3	.1
Value added by mining.....mil dol..	1 554.4	1 555.9	642.5	463.8	132.4	46.3	778.3	504.7	262.3	11.4	70.9	64.2	-1.6
<b>Washington</b>													
Establishments.....number..	189	180	13	3	7	3	61	2	59	-	5	101	9
Employees.....1,000.....	2.8	2.8	(D)	(D)	(Z)	(Z)	1.9	(D)	(D)	-	(D)	.8	(Z)
Value added by mining.....mil dol..	275.7	280.9	(D)	(D)	1.5	(D)	221.2	(D)	(D)	-	(D)	48.8	-5.3
<b>West Virginia</b>													
Establishments.....number..	1 259	1 232	776	328	149	299	159	84	63	12	35	262	27
Employees.....1,000.....	35.4	35.2	12.7	8.3	2.3	2.1	17.7	15.1	2.2	.4	1.0	3.8	.3
Value added by mining.....mil dol..	3 674.1	3 677.6	1 274.2	728.1	257.9	288.2	2 157.5	1 871.6	224.2	61.7	108.0	137.9	-3.5

See footnotes at end of table.

Table 5. **Selected Statistics by Type of Operation for States and Offshore Areas: 1987—Con.**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Geographic area and item	All types of operations	Producing establishments										Non-producing establishments	
		Total	Mines only				Mines with preparation plants				Separately operated preparation plants		Undistributed <sup>1</sup>
			Total	Underground mines	Open pit mines	Combination methods, well operations, and other methods	Total	Underground mines	Open pit mines	Combination and other methods			
<b>UNITED STATES—Con.</b>													
<b>Wisconsin</b>													
Establishments..... number..	169	166	16	1	14	1	102	-	101	1	-	48	3
Employees.....1,000..	1.8	(D)	.1	(D)	.1	(D)	(D)	-	(D)	(D)	-	.3	(D)
Value added by mining.....mil dol..	155.2	(D)	10.6	(D)	3.1	(D)	(D)	-	(D)	(D)	-	17.2	(D)
<b>Wyoming</b>													
Establishments..... number..	774	754	184	7	7	170	55	5	46	4	34	481	20
Employees.....1,000..	17.1	16.8	(D)	(Z)	(D)	3.0	8.0	(D)	4.8	(D)	(D)	(D)	.2
Value added by mining.....mil dol..	4 362.0	4 370.9	(D)	.7	(D)	(D)	1 669.2	(D)	1 249.2	(D)	(D)	(D)	-8.8
<b>Atlantic Offshore</b>													
Establishments..... number..	7	5	-	-	-	-	-	-	-	-	-	5	2
Employees.....1,000..	(D)	(D)	-	-	-	-	-	-	-	-	-	(D)	-
Value added by mining.....mil dol..	(D)	(D)	-	-	-	-	-	-	-	-	-	(D)	(D)
<b>Northern Gulf of Mexico Offshore</b>													
Establishments..... number..	32	29	2	-	-	2	-	-	-	-	-	27	3
Employees.....1,000..	3.4	(D)	(D)	-	-	(D)	-	-	-	-	-	(D)	(D)
Value added by mining.....mil dol..	252.3	(D)	(D)	-	-	(D)	-	-	-	-	-	(D)	(D)
<b>Pacific Offshore</b>													
Establishments..... number..	6	4	-	-	-	-	-	-	-	-	-	4	2
Employees.....1,000..	(D)	(D)	-	-	-	-	-	-	-	-	-	(D)	-
Value added by mining.....mil dol..	(D)	(D)	-	-	-	-	-	-	-	-	-	(D)	-

<sup>1</sup>Includes data for separately operated auxiliary establishments and establishments that were not possible to classify based on information available.





# APPENDIX A.

## Explanation of Terms

**Employment and related items**—The report forms requested separate information on production, development, and exploration workers for a specific payroll period within each quarter of the year and on other employees as of the payroll period which included the 12th of March.

**All employees**—This item includes all full-time and part-time employees on the payrolls of mining establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Also included are employees working for miners paid on a per ton, car, or yard basis. Excluded are employees at the mine but on the payroll of another employer (such as employees of contractors) and employees at company stores, boarding houses, bunk houses, and recreational centers. Also excluded are members of the Armed Forces and pensioners carried on the active rolls but not working during the period. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

**Production, development, and exploration workers**—This item includes employees (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine in mine cars or trucks, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial, and guard services, auxiliary production for use at establishments (such as power plant), record keeping, and other services closely associated with these production and development operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. In addition, other employees at the establishment but not on its payroll are included if paid directly through its own employees, such as superintendents and supervisors. The payments received by these types of employees are included as part of the establishments payroll. Employees above the working-supervisor level are excluded from this category.

**All other employees**—This item covers nonproduction employees of the establishment including those

engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria and medical), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the establishment engaged in the construction of major additions or alterations to the plant and utilized as a separate work force. (Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.)

**Separately operated auxiliary establishments employees**—This item includes employment at separate central administrative offices or auxiliary units of multiestablishment companies and at those offices or units servicing more than one establishment during the payroll period which included March 12. Establishments are classified on the basis of the industry or principal industry served. Employees at an office located at or near the mining establishment are usually included in the mine report.

**All employees, average for year**—The 1987 census report form requested employment figures for production, development, and exploration workers for four selected pay periods (mid-March, May, August, and November). For all other employees, only a mid-March figure was requested. The annual average is an average of the four monthly figures for production, development, and exploration workers plus the March figure for all other employees. This approach was used to simplify the schedule format and lighten the reporting burden of respondents, since it was found that the average of these selected pay periods closely approximates, for most industries, the average employment for the year that would be obtained from 12 monthly pay periods.

**Payroll**—This item includes the gross earnings of all employees on the payroll of mining establishments paid in the calendar year 1987. Respondents were told that in reporting they could follow the definition of payroll used for calculating the Federal withholding tax. It includes all forms of compensation such as salaries, wages, commissions, payments received on a ton, car, or yard basis, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group



insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to the proprietor or partners of unincorporated concerns, and payments to members of Armed Forces and pensioners carried on the active payroll of mining establishments. Also excluded are royalty payments to unions and costs of smithing, explosives, fuses, electric cap lamps, and mine supplies used in production and development work but charged to employees and deducted from their wages.

As in the case of employment and establishment figures, the annual payrolls of separate auxiliary establishments of multiestablishment companies are included in the totals for individual industries and for States.

**Production-, development-, and exploration-worker hours**—This item represents all hours that production, development, and exploration workers worked, both on active days during which there was production or development work and on inactive days when only security guards, inspectors, repair persons, and other maintenance persons were on duty. It includes all hours worked or paid for at the mining operations, except hours paid for vacations, holidays, or sick leave, when the employee was not at the establishment. Included are actual overtime hours, not straight time equivalent hours. Hours of working proprietors or partners are excluded.

**Supplemental labor costs**—This item represents employer's cost for fringe benefits not included in payrolls.

**Legally required expenditures, including Social Security contributions**—This cost includes employer contributions for all programs required under Federal and State legislation, such as Federal Old Age and Survivors' Insurance, unemployment compensation, and worker's compensation. Also included are legally required State temporary disability payments.

**Payments for voluntary programs**—Included in this cost are payments resulting from union negotiated contracts and all employer payments of insurance premiums on hospital and medical plans, life insurance premiums, and premiums on supplementary accident and sickness insurance. For programs supported by joint employer-employee contributions, only the employer payments are included. Also included are payments or allocations on all pension plans regardless of methods of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

**Value added by mining**—This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments (mining

products plus receipts for services rendered) and total capital expenditures. This statistic avoids the duplication in value of shipments and receipts which results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

**Cost of supplies used, purchased machinery installed, etc.**—Besides supplies used and purchased machinery installed, this cost includes fuels and electric energy used and contract work done by others for each establishment. It includes charges to both the current and capital accounts. It also includes the cost of items used during 1987 whether they were purchased, withdrawn from inventories, or received from other establishments of the company. For selected supplies and fuels and for electric energy, both quantity and cost data were requested. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges incurred by the establishment in acquiring the item are included. Companies whose records did not show actual amounts used were asked to approximate use by adding purchases (or receipts) during the year to opening inventory and subtracting closing inventory. Separate figures were requested for (1) selected supplies used, minerals received for preparation, and purchased machinery installed; (2) electric energy purchased; (3) purchased fuels used for heat, power, or the generation of electricity; (4) contract work done by others; and (5) products bought and resold in the same condition. Supplies and equipment used in mine development, plant expansion, and capitalized repairs, which are chargeable to fixed assets accounts, are included in this item, as are supplies furnished without charge to contractors for use at the mining operation and supplies sold to employees for use at the establishment. Excluded are such costs as advertising, insurance, telephone, and research and consulting services of other establishments or such overhead costs as depreciation charges, rent, interest, and royalties.

**Selected supplies used, minerals prepared, etc.**—In addition to the total cost of supplies used, purchased machinery installed, etc., which every establishment was required to report, information was also collected on the consumption of major supplies used in mining. These inquiries were restricted to supplies which were important parts of the cost of production, exploration, and development of a particular industry and for which cost information was available. On report forms for most mineral industries (except the contract services and the crude petroleum and natural gas industries), a uniform inquiry was included on minerals prepared at the reported establishments. Figures were obtained on crude minerals mined at the establishment (quantity), received from other establishments of the



company or purchased from others (quantity and cost), and received for preparation on a custom or toll basis (quantity and estimated value). Establishments consuming less than a specified amount (usually \$25,000) were not required to report the cost of a supply. For small establishments for which administrative records were used, the cost of supplies was included in "not specified by kind."

#### **Value of shipments and receipts and net shipments—**

The amounts shown as value of shipments and receipts for each industry, and for individual products or classes of products, are the net selling values, f.o.b. mine or plant after discounts and allowances, excluding freight charges. Shipments includes all products physically shipped from the establishment during 1987, including material withdrawn from stockpiles and products shipped on consignment, whether or not sold in 1987. Prepared material or concentrates includes preparation from ores mined at the same establishment, purchased, received from other operations of the same company, or received for milling on a custom or toll basis. For products transferred to other establishments of the same company or prepared on a custom basis, companies were requested to report the estimated value, not merely the cost of producing the items. Multiestablishment companies were asked to report value information for each establishment as if it were a separate economic unit. They were instructed to report the value of all products transferred to other plants of the company at their full economic value; to include, in addition to direct cost of production, a reasonable proportion of company overhead and profits.

For all establishments classified in an industry, value of shipments and receipts includes (1) the value of all primary products of the industry, (2) the value of secondary products which are primary to other industries, (3) the receipts for contract work done for others, except custom milling, and (4) the value of products purchased and resold without further processing. Receipts for custom milling are not included to avoid duplication with the value of custom milled ores included in an industry's primary and secondary products.

Some duplication exists in industry and industry group totals because of the inclusion of materials transferred from one establishment to another for mineral preparation or resale. When this duplication is significant, figures generally are shown for both gross and net shipments. The net shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation and the value of resales from the gross shipments.

**Shipments of individual products—**In the 1987 Census of Mineral Industries, information was collected on output for about 200 individual mineral products. In general, the shipments figures of the 1987 and 1982 minerals censuses were confined to separate totals for each crude

and each prepared mineral. When shipments were significant, separate figures were also obtained on crude minerals going to preparation plants and those going to consumers.

Figures were collected on both quantity and value of shipments. Shipments includes commercial shipments and transfers of products to other operations of the same company. For products that are used to a significant extent within the same establishment for power or heat, and for minerals mined and prepared in the same establishment, total production figures or separate data on production for such uses were collected. Typically, production was also collected for products for which there was usually significant differences between total production and total shipments because of stock changes.

For service industries, the amount received or due for services performed during 1987 was collected as a measure of output. For mine operators who also perform services, the amount received for such services was added to the total value of products shipped to determine total value of shipments and receipts for each establishment.

**Capital expenditures—**This item covers expenditures made during the year for development and exploration of mineral properties, for new construction, and for purchased machinery chargeable to fixed assets accounts of the mineral establishment. They are the type for which depreciation, depletion, or Office of Minerals Exploration accounts are ordinarily maintained. Capital expenditures during 1987 were determined as "additions completed during the year plus construction in progress at the end of the year minus construction in progress at the beginning of the year." Reported capital expenditures includes work done on contract, as well as by the mine forces. Expenditures for machinery and equipment includes those made for replacement purposes, as well as those for additions to capacity. Excluded from these expenditures were costs of maintenance and repairs charged as current operating expense and expenditures for land and mineral rights.

Whenever applicable, separate figures were provided for expenditures for development and exploration of mineral property, construction of preparation plants and other construction, new machinery and equipment, used plant, and used equipment acquired from others.

**Gross value of depreciable assets—**Assets data were collected on buildings, other structures, machinery, equipment, capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion accounts are maintained. The values shown represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation costs). The data were collected for the beginning and end of the year. Assets at the beginning of the year plus new and used capital expenditures minus retirements should equal assets at the end of the year. For new construction



or other improvement projects in progress but not completed by the end of the year, the cumulative capital expenditures were included in the beginning- and end-of-year assets figures.

**Retirements**—This item represents the gross value of depreciable assets sold, retired, scrapped, destroyed, abandoned, etc., during 1987. The values shown are the acquisition costs of the retired assets. This item includes the value of assets (at acquisition cost rather than current market value) transferred to other establishments of the same company.

**Depreciation**—This item shows the reduction in value of depreciable assets brought about through use, gradual obsolescence, or the effect of the elements (decay or corrosion) during the year. Included are charges against assets acquired or completed during the year.

**Rental payments**—This item consists of rental payments made to other companies for use of such depreciable assets as buildings, other structures, machinery, and equipment. It does not include payments made to the parent company or another subsidiary of the parent company for the use of buildings and equipment owned by the parent company or its subsidiary. The value of such company-owned assets is included in the gross value of depreciable assets.

For 1987, a clarification was made to the instructions for rental payments to indicate that the equipment should be reported according to the type of lease negotiated with the lessor. If the lease qualified as an "operating lease" the periodic payments made to the producer or the lessor should be reported in the rental section. However, if the leasing arrangement met the criteria set down by the Financial Accounting Standards Board for a "capital lease", the original cost or market value of the equipment or building was to be reported as a value of fixed assets and not as rental payments.

**Current account expenditures**—This item includes all expenses for mineral properties, exploration, and development charged to current accounts. This includes all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not capitalized, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

**Inventories**—This item includes inventories of mined or quarried products and supplies, parts, fuels, etc., at the beginning and end of the year. Included as mined or quarried products are stockpiles of products ready for shipment and stocks of raw products awaiting treatment or beneficiation. Beginning in the 1982 Census of Mineral Industries, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from the 1977 census in which respondents were permitted to value their inventories using any generally accepted accounting method. The inventory figures for 1987 and 1982, therefore, will not be comparable to prior census data because of the change in reporting instructions.

**Fuels and electric energy used**—This item includes the quantity and cost of fuels and electric energy used in mining. For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and electric energy, and a cost figure is shown for "other fuels" (see table 7b of the industry reports). Data were also obtained on the quantity of fuels and electric energy produced and consumed at the same establishment. These data are shown for coal, crude petroleum, and natural gas used at the producing establishments for heat and power, and for electric energy generated and used at the same mining operations. For electric energy, the quantity generated and used is approximated by subtracting the quantity of electric energy sold from the total quantity generated (excluding generating station use).

# **APPENDIX B.**

## **Industry Descriptions**

### **10 METAL MINING**

This major group includes establishments primarily engaged in mining, developing mines, or exploring for metallic minerals (ores). These ores are valued chiefly for the metals contained, to be recovered for use as such or as constituents of alloys, chemicals, pigments or other products. This major group also includes all ore dressing and beneficiating operations, whether performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately. These include mills which crush, grind, wash, dry, sinter, calcine, or leach ore, or perform gravity separation or flotation operations. Magnesite and brucite operations are classified in industry 1459, and crushed dolomite operations are classified in industry 1422. Smelters and refineries are classified in Manufacturing, major group 33, and establishments engaged in producing primary magnesium metal are classified in Manufacturing, industry 3339. The operation of brine wells or sea water plants for the production of magnesium is classified in Manufacturing, major group 28.

When performed by operators of the properties, exploration under preliminary phases of operation should be classified according to the type of ore expected to be found. Exploration performed on a contract or fee basis is classified in industry 1081.

#### **101 IRON ORES**

##### **1011 Iron Ores**

Establishments primarily engaged in mining, beneficiating, or otherwise preparing iron ores and manganiferous ores valued chiefly for their iron content. This industry includes production of sinter and other agglomerates except those associated with blast furnace operations. Blast furnaces primarily engaged in producing pig iron from iron ore are classified in Manufacturing, industry 3312.

#### **102 COPPER ORES**

##### **1021 Copper Ores**

Establishments primarily engaged in mining, milling, or otherwise preparing copper ores. This industry also includes establishments primarily engaged in the recovery of copper concentrates by precipitation and leaching of copper ore. Establishments primarily engaged in the recovery of refined copper by leaching copper concentrates are classified in Manufacturing, major group 33.

### **103 LEAD AND ZINC ORES**

#### **1031 Lead and Zinc Ores**

Establishments primarily engaged in mining, milling, or otherwise preparing lead ores, zinc ores, or lead-zinc ores.

### **104 GOLD AND SILVER ORES**

#### **1041 Gold Ores**

Establishments primarily engaged in mining gold ores from lode deposits or in the recovery of gold from placer deposits by any method. In addition to ore dressing methods such as crushing, grinding, gravity concentration, and froth flotation, this industry includes amalgamation, cyanidation, and the production of bullion at the mine, mill, or dredge site.

#### **1044 Silver Ores**

Establishments primarily engaged in mining, milling, or otherwise preparing silver ores. The production of bullion at the mine or mill site is included.

### **106 FERROALLOY ORES, EXCEPT VANADIUM**

#### **1061 Ferroalloy Ores, Except Vanadium**

Establishments primarily engaged in mining, milling, or otherwise preparing ferroalloy ores, except vanadium. The mining of manganiferous ores valued chiefly for their iron content is classified in industry 1011. Establishments primarily engaged in mining vanadium ore are classified in industry 1094, and those mining titanium ore are classified in industry 1099.

### **108 METAL MINING SERVICES**

#### **1081 Metal Mining Services**

Establishments primarily engaged in performing metal mining services for others on a contract or fee basis, such as the removal of overburden, strip mining for metallic ores, prospect and test drilling, and mine exploration and development. Establishments which have complete responsibility for operating mines for others on a contract or fee



basis are classified according to the product mined rather than as metal mining services. Establishments primarily performing hauling services are classified in Division E, Transportation.

## **109 MISCELLANEOUS METAL ORES**

### **1094 Uranium-Radium-Vanadium Ores**

Establishments primarily engaged in mining, milling, or otherwise preparing uranium-radium-vanadium ores.

### **1099 Miscellaneous Metal Ores, Not Elsewhere Classified**

Establishments primarily engaged in mining, milling, or otherwise preparing miscellaneous metal ores, not elsewhere classified. Production of metallic mercury by furnacing or retorting at the mine site is also included.

## **12 COAL MINING**

This major group includes establishments primarily engaged in producing bituminous coal, anthracite, and lignite. Included are mining operations and preparation plants (also known as cleaning plants and washeries), whether or not such plants are operated in conjunction with mine sites. The production of coal fuel briquettes and packaged fuel is classified in Manufacturing, industry 2999. Establishments primarily engaged in the production of gas and hydrocarbon liquids from coal at the mine site are classified in major group 13.

## **122 BITUMINOUS COAL AND LIGNITE MINING**

### **1221 Bituminous Coal and Lignite Surface Mining**

Establishments primarily engaged in producing bituminous coal or lignite at surface mines or in developing bituminous coal or lignite surface mines. This industry includes auger mining, strip mining, culm bank mining, and other surface mining, by owners or lessees or by establishments which have complete responsibility for operating bituminous coal and lignite surface mines for others on a contract or fee basis. Bituminous coal and lignite preparation plants performing such activities as cleaning, crushing, screening or sizing are included if operated in conjunction with a mine site, or if operated independently of any type of mine.

### **1222 Bituminous Coal Underground Mining**

Establishments primarily engaged in producing bituminous coal in underground mines or in developing bituminous coal underground mines. This industry includes underground mining by owners or lessees or by establishments

which have complete responsibility for operating bituminous coal underground mines for others on a contract or fee basis. Bituminous coal preparation plants performing such activities as cleaning, crushing, screening or sizing are included if operated in conjunction with a mine. Independent bituminous coal preparation plants are classified in industry 1221.

## **123 ANTHRACITE MINING**

### **1231 Anthracite Mining**

Establishments primarily engaged in producing anthracite or in developing anthracite mines. All establishments in the United States that are classified in this industry are located in Pennsylvania. This industry includes mining by owners or lessees or by establishments which have complete responsibility for operating anthracite mines for others on a contract or fee basis. Also included are anthracite preparation plants, whether or not operated in conjunction with a mine.

## **124 COAL MINING SERVICES**

### **1241 Coal Mining Services**

Establishments primarily engaged in performing coal mining services for others on a contract or fee basis. Establishments which have complete responsibility for operating mines for others on a contract or fee basis are classified according to the product mined, rather than as mining services.

## **13 OIL AND GAS EXTRACTION**

This major group includes establishments primarily engaged in: (1) producing crude petroleum and natural gas; (2) extracting oil from oil sands and oil shale; (3) producing natural gasoline and cycle condensate; and (4) producing gas and hydrocarbon liquids from coal at the mine site. Types of activities included are exploration, drilling, oil and gas well operation and maintenance, the operation of natural gasoline and cycle plants, and the gasification, liquefaction, and pyrolysis of coal at the mine site. This major group also includes such basic activities as emulsion breaking and desilting of crude petroleum in the preparation of oil and gas customarily done at the field site. Pipeline transportation of petroleum, gasoline, and other petroleum products (except crude petroleum field gathering lines) is classified in Transportation and Public Utilities, major group 46, and of natural gas in major group 49. Establishments primarily engaged in petroleum refining and in the production of lubricating oils and greases are classified in Manufacturing, major group 29.

## **131 CRUDE PETROLEUM AND NATURAL GAS**

### **1311 Crude Petroleum and Natural Gas**

Establishments primarily engaged in operating oil and gas field properties. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; operation of separators, emulsion



breakers, desilting equipment, and field gathering lines for crude petroleum; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This industry includes the production of oil through the mining and extraction of oil from oil shale and oil sands and the production of gas and hydrocarbon liquids through gasification, liquefaction, and pyrolysis of coal at the mine site. Also included are establishments which have complete responsibility for operating oil and gas wells for others on a contract or fee basis. Establishments primarily engaged in performing oil field services for operators on a contract or fee basis are classified in industry group 138.

## **132 NATURAL GAS LIQUIDS**

### **1321 Natural Gas Liquids**

Establishments primarily engaged in producing liquid hydrocarbons from oil and gas field gases. Establishments recovering liquefied petroleum gases incidental to petroleum refining or to the manufacturing of chemicals are classified in Manufacturing, major group 28 or 29. Establishments recovering helium from natural gas are classified in Manufacturing, major group 28.

## **138 OIL AND GAS FIELD SERVICES**

### **1381 Drilling Oil and Gas Wells**

Establishments primarily engaged in drilling wells for oil or gas field operations for others on a contract or fee basis. This industry includes contractors that specialize in spudding in, drilling in, redrilling, and directional drilling.

### **1382 Oil and Gas Field Exploration Services**

Establishments primarily engaged in performing geophysical, geological, and other exploration services for oil and gas on a contract or fee basis.

### **1389 Oil and Gas Field Services, Not Elsewhere Classified**

Establishments primarily engaged in performing oil and gas field services, not elsewhere classified, for others on a contract or fee basis. Services included are excavating slush pits and cellars; grading, and building of foundations at well locations; well surveying; running, cutting, and pulling casings, tubes, and rods; cementing wells; shooting wells; perforating well casings; acidizing and chemically treating wells; and cleaning out, bailing, and swabbing wells. Establishments which have complete responsibility for operating oil and gas wells for others on a contract or fee basis are classified according to the product extracted rather than as oil and gas field services. Establishments primarily engaged in hauling oil and gas field supplies and

equipment are classified in Division E, Transportation and Public Utilities. Establishments primarily engaged in oil and gas field machine shop work are classified in Manufacturing, industry 3599.

## **14 MINING AND QUARRYING OF NONMETALLIC MINERALS, EXCEPT FUELS**

This major group includes establishments primarily engaged in mining or quarrying, developing mines, or exploring for nonmetallic minerals, except fuels. Also included are certain well and brine operations, and primary preparation plants, such as those engaged in crushing, grinding, washing, or other concentration. Establishments primarily engaged in manufacturing cement are classified in industry 3241; those engaged in manufacturing lime are classified in industry 3274; those engaged in cutting and finishing stone and stone products are classified in industry 3281; and those engaged in manufacturing brick and other structural clay products are classified in industry group 325. Establishments primarily engaged in crushing, pulverizing, or otherwise treating earths, rocks, and minerals mined in industry group 145 or 149; or barite mined in Industry 1479, not in conjunction with mining or quarrying operations, are classified in Manufacturing, industry 3295; establishments primarily engaged in these activities in conjunction with mines or quarries are classified in Mining. Establishments primarily engaged in crushing, pulverizing, or otherwise treating other nonmetallic minerals are classified in Mining, whether or not they are operated in conjunction with mines. Establishments primarily engaged in manufacturing other stone, clay, glass, and concrete products from minerals mined at the same establishment are classified in Manufacturing, major group 32, when separate reports are not available for the mining and manufacturing activities.

## **141 DIMENSION STONE**

### **1411 Dimension Stone**

Establishments primarily engaged in mining or quarrying dimension stone. Also included are establishments engaged in producing rough blocks and slabs. Establishments primarily engaged in mining dimension soapstone or in mining or quarrying and shaping grindstones, pulpstones, millstones, burrstones, and sharpening stones are classified in industry 1499. Establishments primarily engaged in dressing (shaping, polishing, or otherwise finishing) blocks and slabs are classified in Manufacturing, industry 3281. Nepheline syenite mining operations are classified in industry 1459.

## **142 CRUSHED AND BROKEN STONE, INCLUDING RIPRAP**

### **1422 Crushed and Broken Limestone**

Establishments primarily engaged in mining or quarrying crushed and broken limestone, including related rocks, such as dolomite, cement rock, marl, travertine, and calcareous tufa. Also included are establishments primarily



engaged in the grinding or pulverizing of limestone, but establishments primarily engaged in producing lime are classified in Manufacturing, industry 3274.

#### **1423 Crushed and Broken Granite**

Establishments primarily engaged in mining or quarrying crushed and broken granite, including related rocks, such as gneiss, syenite, and diorite.

#### **1429 Crushed and Broken Stone, Not Elsewhere Classified**

Establishments primarily engaged in mining or quarrying crushed and broken stone, not elsewhere classified.

### **144 SAND AND GRAVEL**

#### **1442 Construction Sand and Gravel**

Establishments primarily engaged in operating sand and gravel pits and dredges, and in washing, screening, or otherwise preparing sand and gravel for construction uses.

#### **1446 Industrial Sand**

Establishments primarily engaged in operating sand pits and dredges, and in washing, screening, and otherwise preparing sand for uses other than construction, such as glassmaking, molding, and abrasives.

### **145 CLAY, CERAMIC, AND REFRACTORY MINERALS**

Establishments primarily engaged in mining, milling, or otherwise preparing clays and refractory minerals. Mines operated in conjunction with plants manufacturing cement, brick or other structural clay products, or pottery and related products, are included in this industry when separate reports are available. Establishments primarily engaged in grinding, pulverizing, or otherwise treating clay, ceramic, and refractory minerals not in conjunction with mining or quarrying operations are classified in Manufacturing, industry 3295.

#### **1455 Kaolin and Ball Clay**

Establishments primarily engaged in mining, milling, or otherwise preparing kaolin or ball clay, including china clay, paper clay, and slip clay.

#### **1459 Clay, Ceramic, and Refractory Minerals, Not Elsewhere Classified**

Establishments primarily engaged in mining, milling, or otherwise preparing clay, ceramic, or refractory minerals, not elsewhere classified. Establishments producing clay in conjunction with the manufacture of refractory or structural clay and pottery products are classified in Manufacturing, major group 32.

### **147 CHEMICAL AND FERTILIZER MINERAL MINING**

#### **1474 Potash, Soda, and Borate Minerals**

Establishments primarily engaged in mining, milling, or otherwise preparing natural potassium, sodium, or boron compounds. Establishments primarily engaged in mining common salt are classified in industry 1479.

#### **1475 Phosphate Rock**

Establishments primarily engaged in mining, milling, drying, calcining, sintering, or otherwise preparing phosphate rock, including apatite. Establishments primarily engaged in the production of phosphoric acid, superphosphates, or other manufactured phosphate compounds or chemicals are classified in Manufacturing, major group 28.

#### **1479 Chemical and Fertilizer Mineral Mining, Not Elsewhere Classified**

Establishments primarily engaged in mining, milling, or otherwise preparing chemical or fertilizer mineral raw materials, not elsewhere classified. Establishments primarily engaged in milling, grinding, or otherwise preparing barite not in conjunction with mining or quarry operations are classified in Manufacturing, industry 3295; similar establishments preparing other minerals of this industry are included here. Establishments primarily engaged in producing salt by evaporation of sea water or brine are classified in Manufacturing, industry 2899.

### **148 NONMETALLIC MINERALS SERVICES, EXCEPT FUELS**

#### **1481 Nonmetallic Minerals Services, Except Fuels**

Establishments primarily engaged in the removal of overburden, strip mining, and other services for nonmetallic minerals, except fuels, for others on a contract or fee basis. Establishments primarily engaged in performing hauling services are classified in Division E, Transportation and Public Utilities.

### **149 MISCELLANEOUS NONMETALLIC MINERALS, EXCEPT FUELS**

#### **1499 Miscellaneous Nonmetallic Minerals, Except Fuels**

Establishments primarily engaged in mining, quarrying, milling, or otherwise preparing nonmetallic minerals, except fuels. This industry includes the shaping of natural abrasive stones at the quarry. Establishments primarily engaged in the production of blast, grinding, or polishing sand are classified in industry 1446, and those calcining gypsum are classified in Manufacturing, industry 3275.

# **APPENDIX C.**

## **Authority for Census: Title 13, United States Code**

### **COLLECTION AND PUBLICATION; FIVE-YEAR PERIODS (131)**

The Secretary shall take, compile, and publish censuses of manufactures, of mineral industries, and of other businesses ... in the year 1964, then in the year 1968, and every fifth year thereafter, and each such census shall relate to the year immediately preceding the taking thereof.

### **GEOGRAPHIC SCOPE OF CENSUSES (191A)**

(a)Each of the censuses authorized by this chapter shall include each State, the District of Columbia, the Virgin Islands, the Commonwealth of Puerto Rico, and as may be determined by the Secretary, such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Inclusion of the other areas over which the United States exercises jurisdiction or control shall be subject to the concurrence of the Secretary of State.

### **WRONGFUL DISCLOSURE OF INFORMATION (214)**

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of

this title, publishes or communicates any information, the disclosure of which is prohibited under the revisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

### **FAILURE TO ANSWER QUESTIONS AFFECTING COMPANIES, BUSINESSES, RELIGIOUS BODIES, AND OTHER ORGANIZATIONS: FALSE ANSWERS (224)**

Whoever, being the owner, official, agent, person in charge or assistant to the person in charge of any company, business, institution establishments, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such question, he shall be fined not more than \$10,000.





# APPENDIX D.

## Alphabetic Index of Products and Services of Mineral Establishments

This index provides an alphabetic list of products and services classified in the mineral industries for which data are shown in table 6 of the industry reports. The references in this index refer to items for which statistics are either shown separately in that table or are included as part of a group of products or services. The index also includes products and services referred to in the industry descriptions in the explanatory text of the separate industry reports.

References to products may be found in various tables in the industry chapters; however, detailed product information is typically given in table 6. The industry codes are based on the 1987 edition of the *Standard Industrial Classification (SIC) Manual*<sup>1</sup> published by the Office of Management and Budget.

A	B
Abandoning of wells for oil or gas field operations ..13890	Bailing out wells, oil and gas field.....13890
Abrasive, natural (except quartz and sand) .....14994	Ball clay, crude .....14551
Acidizing and other chemical treatment of wells, except hydraulic fracturing .....13890	Ball clay, prepared .....14552
Agate.....14999	Barite, crude .....14791
Alabaster, crude .....14997	Barite, crushed .....14791
Alabaster, prepared .....14997	Barite flotation concentrates .....14791
Alum, natural, crude.....14741	Barite, ground .....14791
Alum, natural, prepared .....14742	Barite, prepared .....14791
Aluminum ores, crude.....10992	Barium ores, crude.....14791
Aluminum ores, prepared .....10992	Basalt, rough, dimension stone .....14119
Amblygonite .....14799	Basalt, crushed and broken .....14290
Amethyst.....14999	Bastnaesite, crude .....10999
Andalusite, crude.....14599	Bastnaesite, prepared.....10999
Andalusite, prepared .....14599	Bauxite, calcined or activated .....10992
Anthracite, crushed .....12312	Bauxite, crude, undried .....10992
Anthracite, mechanically cleaned .....12312	Bauxite, crude, undried, for direct shipping.....10992
Anthracite, raw, shipments, other than to coal preparation plants.....12311	Bauxite, dried .....10992
Anthracite, raw, shipped to coal preparation plants.12311	Bentonite, crude.....14591
Anthracite, screened .....12312	Bentonite, prepared .....14591
Anthracite, sized.....12312	Beryllium concentrates.....10999
Anthracite, stripping overburden services .....12410	Beryllium ores, crude.....10999
Antimony concentrates .....10999	Bitumens, native.....14992
Antimony ores, crude .....10999	Bituminous coal, crushed-surface .....12212
Apatite, crude, shipped to washer or concentrate ..14751	Bituminous coal, crushed-underground .....12222
Apatite, dried .....14752	Bituminous coal, mechanically cleaned-surface.....12212
Aplite, crude .....14599	Bituminous coal, mechanically cleaned-underground.12222
Aplite, prepared .....14599	Bituminous coal, raw, shipments other than to coal preparation plants from surface .....12211
Argillite, crude, dimension stone .....14119	Bituminous coal, raw, shipments other than to coal preparation plants-from underground .....12221
Arsenic minerals.....14799	Bituminous coal, raw, shipped to coal preparation plants from surface.....12211
Asbestos.....14999	Bituminous coal, raw, shipped to coal preparation plants from underground.....12221
Ash, volcanic .....14993	Bituminous coal, screened-surface .....12212
Asphalt, native.....14992	Bituminous coal, screened-underground.....12222
Auger mining services, bituminous coal .....12410	Bituminous coal, sized-surface .....12212
Auger mining services, lignite .....12410	Bituminous coal, sized-underground .....12222
	Bituminous limestone .....14992

<sup>1</sup>Standard Industrial Classification Manual: 1987: For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.



**B—Con.**

Bituminous sandstone .....	14992
Blasting services for anthracite mining .....	12410
Blasting services for bituminous coal mining .....	12410
Blasting services for lignite mining .....	12410
Blasting services for metal mining .....	10810
Blasting services for nonmetallic minerals (except fuels) mining .....	14810
Bleaching clay, crude .....	14593
Bleaching clay, prepared .....	14593
Bluestone, crude, dimension .....	14119
Board roads, building of, for oil or gas field operations .....	13890
Borate compounds and minerals, prepared .....	14744
Borax .....	14744
Boron compounds .....	14744
Boulders (mixed), crushed and broken .....	14290
Brimstone .....	14794
Briquets, iron .....	10112
Brucite, crude .....	14599
Brucite, prepared .....	14599
Building board roads for oil or gas field operations .....	13890
Building, erecting, repairing, and dismantling rigs and derricks for oil or gas field operations .....	13890
Bullion, gold, produced at mine site .....	10413
Burley fire clay, crude .....	14592
Burley fire clay, prepared .....	14592
Burrstones, natural .....	14994
Butane, natural .....	13212

**C**

Cadmium, concentrates .....	10612
Calamine, prepared .....	10312
Calaverite, prepared .....	10412
Calcareous tufa, rough, dimension .....	14111
Calcareous tufa, crushed and broken .....	14220
Calcined phosphate rock .....	14752
Calcite, optical grade .....	14999
Canal dredging for oil or gas field operations .....	13890
Carbonates, sodium .....	14743
Celestite .....	14799
Cement rock, crushed and broken .....	14220
Cementing wells for oil or gas field operations .....	13890
Cerium concentrates .....	10999
Cerium ores, crude .....	10999
Cerrusite, prepared .....	10312
Cesium .....	10999
Chalcocite, prepared .....	10212
Chalcopyrite, prepared .....	10212
Chalk, crushed and broken .....	14220
Chemical treatment of wells for oil or gas field operations .....	13890
China clay, crude .....	14551
China clay, prepared .....	14552
Chromite, concentrates or prepared .....	10612
Chromite, crude .....	10611
Chromium concentrates .....	10612
Chromium ores, crude .....	10611

**C—Con.**

Cinnabar, crude .....	10993
Cinnabar, prepared .....	10993
Clay, ball, crude .....	14551
Clay, ball, prepared .....	14552
Clay, bleaching .....	14593
Clay, ceramic and refractory minerals, crude .....	14599
Clay, ceramic and refractory minerals, prepared .....	14599
Clay, china, crude .....	14551
Clay, china, prepared .....	14552
Clay, common, crude .....	14597
Clay, common, prepared .....	14597
Clay, fire, crude .....	14592
Clay, fire, prepared .....	14592
Clay, paper, crude .....	14551
Clay, paper, prepared .....	14552
Clay, slip, crude .....	14551
Clay, slip, prepared .....	14552
Clays, natural, bleaching .....	14593
Cleaning lease tanks for oil or gas field operations .....	13890
Cleaning out, including steam cleaning, bailing out, or swabbing wells for oil or gas field operations .....	13890
Clearing locations for oil or gas field operations .....	13890
Cobalt ores, concentrates .....	10612
Cobalt ores, crude .....	10611
Colemanite .....	14744
Columbite, crude .....	10611
Columbite, prepared .....	10612
Columbium ores, crude .....	10611
Columbium ores, prepared .....	10612
Common clay, crude .....	14597
Common clay, prepared .....	14597
Condensate, cycle .....	13212
Construction of oil or gas pipelines on lease; construction of gathering lines to point where distribution company takes over .....	13890
Construction sand, crude .....	14421
Construction sand, treated .....	14422
Contract services, general, for oil or gas field operations .....	13890
Copper concentrates .....	10212
Copper ore, crude, and old tailings shipped to mills for treatment .....	10211
Copper ore, crude, and old tailings shipped to smelters .....	10211
Copper-water precipitates, including precipitates from ore leached in place .....	10213
Core cutting in oil or gas wells .....	13890
Core drilling, oil or gas field exploration services .....	13820
Cornwall stone, crude .....	14599
Corundum .....	14994
Crane work-on lease, for oil or gas field operations .....	13890
Crude oil .....	13111
Crude petroleum .....	13111
Cryolite .....	14999
Culm bank recovery, for anthracite (services) .....	12410

**C—Con.**

Cuprite, prepared .....	10212
Cutting casing, tubes or rods for oil or gas field operations .....	13890
Cutting cores in oil or gas wells .....	13890
Cyanite, crude .....	14599
Cyanite, prepared .....	14599
Cycle condensate .....	13212

**D**

Diabase, crude, dimension stone .....	14119
Diabase, crushed and broken .....	14290
Diamonds, industrial .....	14994
Diaspore, crude .....	14592
Diaspore, prepared .....	14592
Diatomaceous earth .....	14996
Diatomite .....	14996
Dimension stone, rough, other than granite or limestone .....	14119
Diorite, crude, dimension stone .....	14115
Diorite, crushed and broken .....	14230
Directional drilling for oil or gas field operations .....	13810
Dirt work in oil or gas fields .....	13890
Disposal systems, salt water, for oil or gas field operations .....	13890
Dolomite, rough, dimension stone .....	14111
Dolomite, crushed and broken .....	14220
Dolomite marble, rough, dimension, stone .....	14119
Dolomitic marble, crushed and broken .....	14290
Dragstones .....	14994
Dredging canals for oil or gas field operations .....	13890
Dried phosphate rock .....	14752
Drill stem testing in oil, gas, dry and service well drilling .....	13890
Drilling, core, oil or gas field exploration services .....	13820
Drilling, directional, oil or gas field .....	13810
Drilling dry holes for gas and oil field .....	13810
Drilling gas wells .....	13810
Drilling oil wells .....	13810
Drilling rat holes and mouse holes for oil or gas field operations .....	13890
Drilling service wells for oil or gas field operations .....	13810
Drilling, shot hole, oil or gas field exploration services .....	13820
Drilling sites, preparation of, for oil or gas field operations .....	13890

Drilling, stratigraphic oil or gas field exploration services .....	13820
Drilling water intake wells, oil or gas field .....	13810
Drilling wells for gas or oil field operations .....	13810
Driving keyways for oil or gas field operations .....	13890
Dumortierite, crude .....	14599
Dumortierite, prepared .....	14599

**E**

Earth, diatomaceous .....	14996
Earth, fuller's (including all natural bleaching clays) .....	14593
Emery .....	14994
Engine installing for oil or gas field operations .....	13890

**E—Con.**

Electrowon copper recovered from leaching operations .....	10213
Erecting, cleaning, repairing, and dismantling lease tanks for oil or gas field operations .....	13890
Ethane, natural gas liquid .....	13212
Excavating mud pits, slush pits, and cellars for oil or gas field operations .....	13890
Exploration services for anthracite mining .....	12410
Exploration services for bituminous coal mining .....	12410
Exploration services for lignite mining .....	12410
Exploration services for metal mining .....	10810
Exploration services for nonmetallic minerals (except fuels) mining .....	14810

**F**

Feldspar, crude .....	14596
Feldspar, crushed or ground .....	14596
Feldspar, prepared .....	14596
Ferberite concentrates .....	10612
Ferberite crude ores .....	10611
Ferroalloy ores, except molybdenum and vanadium, crude .....	10611
Fertilizer minerals, natural .....	14799
Fire clay, crude (including plastic, flint, diaspore, burley and stoneware) .....	14592
Fire clay, plastic, crude .....	14592
Fire clay, plastic, prepared .....	14592
Fishing for tools (for oil or gas field operations) .....	13890
Flagstones, crude, dimension .....	14119
Flint, fire clay, crude .....	14592
Flint, fire clay, prepared .....	14592
Flooding and water injection for oil or gas field operations .....	13890
Fluorite, crude .....	14792
Fluorspar, crude .....	14792
Fluorspar, crushed .....	14792
Fluorspar flotation concentrates .....	14792
Fluorspar, ground .....	14792
Fluorspar, prepared .....	14792
Fuller's earth .....	14593

**G**

Gabbro, crude, dimension stone .....	14119
Gabbro, crushed and broken stone .....	14290
Galena, prepared .....	10312
Ganister, crushed and broken stone .....	14290
Garnet .....	14994
Gas, natural .....	13115
Gas or oil field geological exploration .....	13820
Gas or oil field geophysical exploration .....	13820
Gas residue .....	13213
Gasoline, natural .....	13212
Gem stones, natural .....	14999
General oil or gas field contracting .....	13890
Geological exploration, oil or gas field .....	13820
Geophysical exploration, oil or gas field .....	13820
Geophysical surveying services for anthracite mining .....	12410



**G—Con.**

Geophysical surveying services for bituminous coal mining .....	12410
Geophysical surveying services for lignite mining.....	12410
Geophysical surveying services for metal mining.....	10810
Geophysical surveying services for the mining of nonmetallic minerals (except fuels) .....	14810
Germanium .....	10999
Gilsonite .....	14992
Glass sand for melting only .....	14461
Glauber's salt.....	14743
Gneiss, rough, dimension.....	14115
Gneiss, crushed and broken .....	14230
Gold concentrates .....	10412
Gold mill bullion and precipitates recovered by amalgamation .....	10413
Gold mill bullion and precipitates recovered by cyanidation .....	10413
Gold ore, lode, crude, and old tailings shipped to mills for treatment.....	10411
Gold ore, lode, crude, and old tailings shipped to smelters .....	10411
Gold, placer.....	10413
Grading well foundations at well locations for oil or gas field operations.....	13890
Grahamite.....	14992
Granite, rough, dimension stone .....	14115
Granite, crushed and broken .....	14230
Granules, slate .....	14290
Graphite.....	14999
Gravel, crude .....	14421
Gravel, prepared .....	14422
Gravel, run of pit or bank .....	14421
Gravel, washed and screened.....	14422
Greensand.....	14999
Greenstone, crude, dimension .....	14119
Grinding pebbles .....	14994
Grindstones.....	14994
Grits, crushed and broken stone .....	14290
Guano.....	14799
Gypsite, crude .....	14997
Gypsite, prepared .....	14997
Gypsum, crude .....	14997
Gypsum, crushed, ground, screened or dried .....	14997

**H**

Hafnium .....	10999
Hones .....	14994
Huebnerite, crude .....	10611
Huebnerite, prepared .....	10612
Humus, peat .....	14995
Hydraulic fracturing.....	13890

**I**

Iceland spar .....	14999
Ilmenite, concentrates .....	10991
Ilmenite ore, crude .....	10991
Indium.....	10999

**I—Con.**

Industrial sand.....	14469
Installing production equipment for oil or gas field operations .....	13890
Iridium .....	10999
Iron briquets, agglomerates .....	10112
Iron ore, crude, beneficiating-grade and/or agglomeration-grade .....	10111
Iron ore, crude, for direct shipping .....	10111
Iron pellets, agglomerates .....	10112
Iron sinter, agglomerates .....	10112
Isopentane, natural gas liquid .....	13212

**J**

Jade.....	14999
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**K**

Kaolin and ball clay, crude .....	14551
Kaolin and ball clay, prepared.....	14552
Kernite .....	14744
Keyway driving for oil or gas field operations .....	13890
Kyanite, crude .....	14599
Kyanite, prepared .....	14599

**L**

Laterite, crude .....	14599
Laterite, prepared .....	14599
Lead concentrates .....	10312
Lead ore, crude, and old tailings shipped to mills for treatment.....	10311
Lead ore, crude, and old tailings shipped to smelters.....	10311
Lease condensate .....	13111
Lease maintenance for oil or gas field operations .....	13890
Lease tanks, oil or gas field, erecting, cleaning and repairing .....	13890
Lepidolite .....	14799
Leveling for oil or gas field operations.....	13890
Lignite, crushed .....	12212
Lignite, mechanically cleaned .....	12212
Lignite, raw, shipped to coal preparation plants .....	12211
Lignite, screened .....	12212
Lignite, sized.....	12212
Limestone, bituminous .....	14992
Limestone, rough, dimension stone.....	14111
Limestone, crushed and broken.....	14220
Limonite, for treatment.....	10111
Limonite, for agglomeration plants not at blast furnace.....	10112

Lithium, minerals .....	14799
Location clearing for oil or gas field operations.....	13890
Lode gold concentrates.....	10412
Lode gold, mill bullion.....	10413
Logging wells, gas or oil field .....	13890

**M**

Magnesite, crude .....	14599
Magnesite, prepared .....	14599
Magnetite, for treatment .....	10111
Magnetite, for agglomeration plants not at blast furnace .....	10112

## M—Con.

Manganese concentrates .....	10612
Manganese and manganiferous ores, crude for treatment .....	10611
Manganese nodules .....	10612
Manganese ore, crude, for treatment .....	10611
Manganese ore, crude, beneficiating-grade and agglomeration grade .....	10611
Manganese ore, crude, direct shipping .....	10611
Manganese ores, treated .....	10612
Manganese sinter .....	10612
Manganite, crude, for treatment .....	10611
Manganite, prepared .....	10612
Marble, crude, dimension stone .....	14119
Marble, including dolomitic marble, crushed and broken .....	14290
Marcasite .....	14799
Marl, crushed and broken .....	14222
Meerscham .....	14999
Mercury ore, crude .....	10993
Mercury, metal .....	10993
Mica .....	14991
Mica schist, crude, dimension .....	14119
Mica schist, crushed and broken .....	14290
Microlite, crude .....	10999
Microlite, prepared .....	10999
Millstones .....	14994
Mine shaft sinking services for anthracite .....	12410
Mine shaft sinking services for bituminous coal mining .....	12410
Mine shaft sinking services for lignite mining .....	12410
Mine shaft sinking services for metal mining .....	10810
Mine shaft sinking services for nonmetallic minerals (except fuels) mining .....	14810
Mine tunneling services for anthracite mining .....	12410
Mine tunneling services for bituminous coal mining .....	12410
Mine tunneling services for lignite mining .....	12410
Mine tunneling services for metal mining .....	10810
Mine tunneling services for nonmetallic minerals (except fuels) mining .....	14810
Mineral pigments, natural .....	14799
Molding sand .....	14465
Molybdenite, crude .....	10611
Molybdenite, prepared .....	10612
Molybdenum concentrates .....	10612
Molybdenum ores, crude .....	10611
Molybdite, crude .....	10611
Molybdite, prepared .....	10612
Monazite, crude .....	10999
Monazite, prepared .....	10999
Mouse hole and rat hole drilling for oil or gas field operation .....	13890
Mud logging for oil or gas field operations .....	13890
Muscovite .....	14991

## N

Native asphalt .....	14992
Natural abrasives (except quartz) .....	14994
Natural gas .....	13115
Natural gasoline .....	13212
Nepheline syenite, crude (feldspathic material use) .....	14596
Nepheline syenite, prepared (feldspathic material use) .....	14596
Nickel concentrates .....	10612
Nickel ores, crude .....	10611

## O

Ocher .....	14799
Oil, crude .....	13111
Oilstones .....	14994
Olivine .....	14599
Onyx marble, crude, dimension .....	14119
Onyx marble, crushed and broken .....	14290
Optical grade calcite .....	14999
Osmium .....	10999
Overburden stripping services for anthracite mining .....	12410
Overburden stripping services for bituminous coal mining .....	12410
Overburden stripping services for lignite mining .....	12410
Overburden stripping services for metal mining .....	10810
Overburden stripping services for nonmetallic minerals (except fuels) mining .....	14810

## P

Palladium .....	10999
Paper clay, crude .....	14551
Paper clay, prepared .....	14552
Paraffin services for oil or gas field operations .....	13890
Pavers .....	14994
Peat .....	14995
Pebbles, grinding .....	14994
Pegmatite (feldspar), crude .....	14596
Perforating well casing, oil or gas field services .....	13890
Perlite, crude or prepared .....	14999
Petroleum, crude .....	13111
Phlogopite .....	14991
Phosphate rock, crude, shipped to washer or concentrator .....	14751
Phosphate rock, dried, calcined or sintered .....	14752
Phosphate rock, washed or concentrated: shipped to drier .....	14752
Pigments, mineral, natural .....	14799
Pinite, crude .....	14599
Pinite, prepared .....	14599
Pipe line construction on lease; construction of gathering lines to point where distribution company takes over (oil or gas only) .....	13890
Pipe testing for oil or gas field operations .....	13890
Pipestones .....	14999
Pitchblende, crude .....	10941
Pitchblende, prepared .....	10942
Placer gold .....	10413
Placer silver .....	10443



**P—Con.**

Plastic fire clay, crude .....	14592
Plastic fire clay, prepared.....	14592
Platinum.....	10999
Platinum-group metals .....	10999
Plugging wells, oil or gas field services.....	13890
Potassium bromide.....	14742
Potassium salts, crude.....	14741
Potassium salts, processed or refined.....	14742
Propane (natural).....	13212
Precious stones .....	14999
Preparation of drilling sites for oil or gas field operations .....	13890
Prospect and test drilling services for anthracite mining.....	12410
Prospect and test drilling services for bituminous coal mining .....	12410
Prospect and test drilling services for lignite mining.....	12410
Prospect and test drilling services for metal mining.....	10810
Prospect and test drilling services for nonmetallic minerals (except fuels) mining .....	14810
Psilomelane, crude, ore for treatment .....	10611
Pulling casing, tubes, or rods for oil or gas field operations .....	13890
Pulpstones, natural.....	14994
Pumice .....	14993
Pumicite.....	14993
Pumps installed for oil or gas field operations .....	13890
Pyrite concentrates.....	14799
Pyrites, fines.....	14799
Pyrites, lump ore .....	14799
Pyrolusite, crude, for treatment.....	10611
Pyrolusite, prepared.....	10612
Pyrophyllite, crude.....	14998
Pyrophyllite flotation concentrates .....	14998
Pyrophyllite, prepared.....	14998
Pyrophyllite, sawed, crushed or ground.....	14998
Pyrrhotite.....	14799

**Q**

Quartz crystal (pure) .....	14999
Quartzite, crushed and broken .....	14290
Quartzite, ganister, crushed and broken.....	14290
Quicksilver (metal), prepared at mine site.....	10993
Quicksilver ore.....	10993

**R**

Radium ores .....	10941
Rare-earth metal concentrates.....	10999
Rare-earth metal ores, crude.....	10999
Rat hole and mouse hole drilling for oil and gas field operations.....	13890
Reconditioning wells for oil or gas field operations.....	13810
Remedial work, subsurface, for oil or gas field operations .....	13810
Residue gas .....	13213
Reworking wells, oil or gas field operations .....	13810
Rhodium .....	10999

**R—Con.**

Rhodochrosite, crude, for treatment .....	10611
Rhodochrosite, prepared .....	10612
Rig building, repairing and dismantling oil or gas wells .....	13890
Rig skidding, for oil or gas field operations.....	13890
Rigs built, erected, repaired and dismantled for oil or gas field operations.....	13890
Riprap, granite.....	14230
Riprap, limestone.....	14220
Riprap, miscellaneous stone (except limestone and granite) .....	14290
Roads, board, building of, for oil or gas field operations .....	13890
Rock salt (sodium chloride) .....	14793
Rock, volcanic, light colored, crushed and broken ..	14290
Rocks, volcanic, light colored, rough, dimension ...	14119
Rolling pipe for oil or gas field operations.....	13890
Roscoelite, crude.....	10941
Roscoelite, prepared .....	10942
Roustabout work for oil or gas field operations .....	13890
Rubber clay, crude .....	14551
Rubber clay, prepared .....	14552
Rubbing stones.....	14994
Rubble, except limestone and granite .....	14119
Rubble, limestone .....	14111
Rubidium.....	10999
Ruby .....	14999
Running, cutting and pulling casting, tubes or rods for oil or gas field operations.....	13890
Ruthenium .....	10999
Rutile concentrates .....	10991
Rutile ore, crude.....	10991

**S**

Salt, common.....	14793
Salt, (rock), sodium chloride.....	14793
Salt water disposal systems, for oil or gas field operations .....	13890
Sand, blast.....	14469
Sand blasting pipe lines on lease for oil or gas field operations.....	13890
Sand, common, crude .....	14421
Sand, common, prepared.....	14422
Sand, construction, prepared.....	14422
Sand, construction, run of pit or bank .....	14421
Sand, construction, screened .....	14422
Sand, construction, washed, screened, ground, or prepared .....	14422
Sand, engine .....	14469
Sand, filtration .....	14469
Sand, glass, for melting only .....	14461
Sand, grinding .....	14469
Sand, industrial.....	14469
Sand, oil .....	14469
Sandstone, bituminous.....	14992
Sandstone, crude, dimension.....	14119

## S—Con.

Sandstone, crushed and broken .....	14290
Sapphire .....	14999
Scandium .....	10999
Scheelite, crude .....	10611
Scheelite, prepared .....	10612
Schist, mica, crude, dimension .....	14119
Schist, mica, crushed and broken .....	14290
Scoria .....	14993
Scythestones .....	14994
Selenium .....	10999
Seismograph surveys for oil or gas field operations .....	13820
Selenite, crude .....	14997
Selenite, prepared .....	14997
Semianthracite, mechanically cleaned from surface operations .....	12212
Semianthracite, mechanically cleaned from underground operations .....	12222
Semianthracite, raw, (shipped to preparation plants) from surface operations .....	12211
Semianthracite, raw, (shipped to preparation plants) from underground operations .....	12221
Semiprecious stones .....	14999
Serpentine, crude, dimension stone .....	14119
Serpentine, crushed and broken stone .....	14290
Shale, crude .....	14597
Shale, prepared .....	14597
Shell mining .....	14999
Shooting wells for oil or gas field operations .....	13890
Shot hole drilling, oil or gas field services .....	13890
Siderite (carbonate), crude, for treatment .....	10111
Siderite concentrates, for agglomeration plants not at blast furnace .....	10112
Sienna .....	14799
Silica (from sand) .....	14461
Sillimanite, crude .....	14599
Sillimanite, prepared .....	14599
Silver concentrates .....	10442
Silver mill bullion and precipitates recovered by amalgamation .....	10443
Silver mill bullion and precipitates recovered by cyanidation .....	10443
Silver ore, crude, for shipment to mills for treatment .....	10441
Silver ore, crude, and old tailings shipped to mills for treatment .....	10441
Silver ore, crude, and old tailings shipped to smelters .....	10441
Silver placer .....	10443
Sintered iron .....	10112
Sintered phosphate rock .....	14752
Skidding of rigs for oil or gas field operations .....	13890
Slate, crude, dimension stone .....	14119
Slate, crush and broken .....	14290
Slate granules, crushed and broken .....	14290

## S—Con.

Slip clay, crude .....	14551
Slip clay, prepared .....	14552
Smithsonite, crude, for shipment to mills for treatment .....	10311
Smithsonite, prepared .....	10312
Soapstone, crude .....	14998
Soapstone, crushed, ground or sawed .....	14998
Soapstone flotation concentrates .....	14998
Soapstone, prepared .....	14998
Soda ash, natural .....	14743
Sodium borates .....	14744
Sodium carbonates, natural .....	14743
Sodium chloride (rock salt) .....	14793
Sodium sulfate .....	14743
Spar, Iceland, prepared .....	14999
Sphalerite, crude, for shipment to mill for treatment .....	10311
Sphalerite, prepared .....	10312
Spodumene .....	14799
Spudding in wells for oil or gas field operations .....	13810
Staurolite .....	14999
Steam cleaning for oil or gas wells .....	13890
Steatite, crude .....	14998
Steatite, prepared .....	14998
Stone, crude, dimension other than limestone and granite .....	14119
Stone, crushed and broken, other than granite or limestone .....	14290
Stone, abrasive .....	14994
Stoneware fire clay, crude .....	14592
Stoneware fire clay, prepared .....	14592
Stratigraphic drilling, oil or gas field exploration .....	13820
Strip mining services for anthracite mining .....	12410
Strip mining services for bituminous coal mining .....	12410
Strip mining services for lignite mining .....	12410
Strip mining services for metal mining .....	10810
Strip mining services for nonmetallic minerals (except fuels) mining .....	14810
Stripping overburden services for anthracite mining .....	12410
Stripping overburden services for bituminous coal mining .....	12410
Stripping overburden services for lignite mining .....	12410
Stripping overburden services for metal mining .....	10810
Stripping overburden services for nonmetallic minerals (except fuels) mining .....	14810
Strontianite .....	14799
Strontium minerals .....	14799
Subbituminous coal, mechanically crushed, screened or sized from surface operations .....	12212
Subbituminous coal, mechanically crushed, screened or sized from underground operations .....	12222
Subbituminous coal, raw, shipment to coal preparation plants from surface operations .....	12211



**S—Con.**

Subbituminous coal, raw, shipment to coal preparation plants from underground operations ..	12221
Subsurface remedial work for oil or gas field operations .....	13810
Sulfate, sodium .....	14743
Sulfate, native .....	14794
Surveying wells for oil or gas field operations.....	13890
Swabbing wells for oil or gas field operations.....	13890
Syenite (except nepheline), crude, dimension stone.....	14115
Syenite (except nepheline), crushed and broken ...	14230
Syenite (nepheline), crude .....	14596
Syenite (nepheline), prepared .....	14596
Sylvanite, crude ore for shipment to smelters.....	10411
Sylvanite, concentrates .....	10412

**T**

Taconite pellets .....	10112
Taconite, crude ore for treatment.....	10111
Tailing in wells, oil or gas field .....	13810
Talc, crude.....	14998
Talc, crushed, ground or sawed.....	14998
Talc, flotation concentrates.....	14998
Talc, prepared .....	14998
Tantalite, crude ore for treatment.....	10611
Tantalite, prepared .....	10612
Tantalum, crude ores for direct shipment .....	10611
Tantalum, prepared .....	10612
Telluride (gold) mining, crude, for shipment to mills .....	10411
Tellurium .....	10996
Testing, drill-stem, for oil or gas field operations ...	13890
Testing, pipe, for oil or gas field operations .....	13890
Thallium .....	10999
Thorite, crude.....	10999
Thorite, prepared .....	10999
Thorium ores, crude.....	10999
Thorium, prepared.....	10999
Tripoli .....	14994
Trona.....	14743
Tufa, calcareous, crude, dimension .....	14111
Tufa, calcareous, crushed and broken.....	14220
Tungsten concentrates .....	10612
Tungsten ores, crude .....	10611
Turquoise .....	14999

**U**

Ulexite.....	14744
Umber .....	14799
Uraninite, crude .....	10941
Uraninite, prepared.....	10942
Uranium-vanadium concentrates .....	10942
Uranium-vanadium ore, crude .....	10941

**V**

Vacuum truck service for oil or gas field operations.....	13890
Vanadium, concentrates .....	10942
Vanadium ores, crude.....	10941
Verde antique, rough, dimension stone.....	14119
Verde antique, crushed and broken stone .....	14290
Vermiculite .....	14999
Volcanic ash.....	14993
Volcanic rock, light colored, rough, dimension .....	14119
Volcanic rock, light colored, crushed and broken....	14290

**W**

Washeries, anthracite .....	12312
Washeries, bituminous coal .....	12212
Water injection or flooding for oil or gas field operations .....	13890
Water intake well drilling for oil or gas field operations .....	13810
Well casing running, cutting and pulling for oil or gas field operations .....	13890
Well logging, oil or gas field .....	13890
Well plugging, for oil or gas field operations .....	13890
Well surveying, for oil or gas field operations .....	13890
Wellhead fittings, installed for oil or gas field operations .....	13890
Wells, oil, gas, dry, or service: reworking.....	13810
Wells, oil, gas, or service: drilling in, spudding in, tailing in .....	13810
Whetstones .....	14994
Whiting, crushed and broken.....	14220
Willemite, crude, for shipment to smelters .....	10311
Willemite, prepared.....	10312
Wireline services for oil or gas field operations .....	13890
Wolframite, crude .....	10611
Wolframite, prepared.....	10612
Wollastonite .....	14999
Workover of wells for oil or gas field operations.....	13810
Wulfenite, crude .....	10611
Wulfenite, prepared .....	10612
Wurtzilite .....	14992

**Y**

Yttrium, prepared.....	10999
------------------------	-------

**Z**

Zinc concentrates .....	10312
Zinc ore, crude, for shipment to smelters .....	10311
Zinc ore, crude, and old tailings shipped to mills for treatment.....	10311
Zinc ore, crude, and old tailings shipped to smelters .....	10311
Zirconium concentrates.....	10999
Zirconium ores, curde.....	10999

## APPENDIX E. Report Forms

This appendix contains reproductions of a representative selection of the report forms used in the 1987 Economic Censuses with emphasis on the census of mineral industries. The use of each of the forms is described in the Introduction, item 7, Report Forms. Following is a list of forms included in this appendix:

Number	Title	Number	Title
NC-9901	<b>Report of Organization</b> —This company-wide report was used prior to mailing the 1987 census questionnaires to develop the directory of establishments operated by multiunit companies.	ES-9100	<b>Enterprise Summary Report</b> —This form was sent to each large multiestablishment company in addition to a specific questionnaire for each establishment and requested consolidated company totals of selected data.
NC-9920	<b>Listing of Additional Establishments</b> —This form was mailed to all multiestablishment companies to obtain a list of establishments that were acquired after the NC-9901 was filed.	ES-9200	<b>Auxiliary Establishment Report</b> —This form was completed by establishments whose function was to provide centralized administrative, management, or other supporting services for other establishments of the same company, but not for the general public or other companies.
NC-9923	<b>General Schedule</b> —This questionnaire was used to obtain information from small companies for which the industry code available in the Social Security Administration records was not precise enough to indicate which one of the standard questionnaires should be mailed.	MC-1403	<b>Chemical and Fertilizer and Miscellaneous Nonmetallic Minerals</b> —This is a typical example of the types of general statistics, supplies, and product and service questions asked and how each form was tailored to reflect the uniqueness of each industry



DUE DATE: FEBRUARY 15, 1988

OMB No. 0607-0535: Approval Expires December 31, 1988

FORM NC-9901 (Items 1-4)

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS**1987 ECONOMIC CENSUSES  
REPORT OF ORGANIZATION****NOTICE** — Response to this inquiry is required by law (Title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.In correspondence pertaining to this report  
please refer to this Census File Number (CFN)

Please correct errors in name, address, and Zip Code. Enter street and number if not shown.

Census  
use only**Important — Please read**Please complete this report by February 15, 1988 and  
RETURN ORIGINAL COPY TO —**BUREAU OF THE CENSUS  
1201 East Tenth Street  
Jeffersonville, Indiana 47134****Item 1 — CERTIFICATION**

Name of person to contact regarding this report	Address (if different from above address)	Telephone		
		Area code	Number	Extension
This report is substantially accurate.				
Signature of authorized person	Title	Date		

**Item 2 — COMPANY OWNERSHIP OR CONTROL — DOMESTIC****Does another U.S. (domestic) company own more than 50 percent of the voting stock of your company OR have the power to control the management and policies of your company?**1 ☐ YES — Enter the following information on  
the owning or controlling company **→**  
then go to item 3.2 ☐ NO — Go to item 3.

Name of owning or controlling company	Home office address (Number and street, city, state, and ZIP Code)	Employer Identification Number of owning or controlling company
Percent of voting stock owned — Mark (X) one — <b>→</b> 1 <input type="checkbox"/> Less than 50% 2 <input type="checkbox"/> 50% 3 <input type="checkbox"/> More than 50%		

**Item 3 — COMPANY OWNERSHIP OR CONTROL — FOREIGN****Does a foreign entity (company, individual, government, etc.) own directly or indirectly 10 percent or more of the voting stock or other equity rights of your company?**1 ☐ YES — Enter the following information  
on the owning entity **→**  
then go to item 4.2 ☐ NO — Go to item 4.

Name of foreign beneficial owner	Home office address (Number and street, city, country)
Percent of ownership (direct or indirect) — Mark (X) one — <b>→</b> 1 <input type="checkbox"/> Less than 10% 2 <input type="checkbox"/> 10-24% 3 <input type="checkbox"/> 25-49% 4 <input type="checkbox"/> 50% 5 <input type="checkbox"/> 51-99% 6 <input type="checkbox"/> 100%	

**Item 4 — FOREIGN AFFILIATES****Does this company alone, or with its domestic affiliates, own 10 percent or more of the voting stock of an incorporated foreign business enterprise, or an equivalent interest in an unincorporated foreign business enterprise, including ownership of real estate?**1 ☐ YES2 ☐ NO

★ U.S. Government Printing Office: 1987-175-888

**1987 ECONOMIC CENSUSES**  
**REPORT OF ORGANIZATION**Refer to this  
**CENSUS FILE NUMBER**  
in any correspondence  
pertaining to this report**Item 5A — ESTABLISHMENTS OF YOUR COMPANY AND ITS SUBSIDIARIES, AND THEIR 1987 EMPLOYMENT AND PAYROLL**

This item should include an up-to-date list of all establishments of your company and its subsidiaries for which separate establishment reports are not required for the 1987 Economic Censuses. For your convenience the prelisted establishments have been grouped in the following sequence: Employer identification Number, major activity, and geographic location. Please bring this list up to date as follows:

- **Column (a)** — Correct any errors or omissions in the prelisted information.

- **Column (b), 1987 establishment data** — Report number of employees and payroll for each establishment (including part-year operations). Please do not combine data for establishments. If book figures are not available for providing employment and payroll data for each establishment, please provide your best estimates.

- **Column (c)** — Report status of each establishment as of the end of 1987. Please read the definitions and instructions on the reverse side before completing this item.

Line No.	Employer Identification (EI) Number, establishment name, address of physical location (including ZIP Code), and major activity <i>Add store or plant number, if any, and correct any errors or omissions</i>		1987 establishment data <i>Report the number of employees and payroll for each establishment (including part-year operations)</i>				Status of establishment at end of 1987 <i>Mark (X) one box and complete as indicated</i>			
	(a)		(b)		(c)		(d)			
Census use only	Employer ID number	Major activity	Employees (during pay period including March 12, 1987)	(Number)	1 <input type="checkbox"/> In operation 2 <input type="checkbox"/> Idle or inactive (but still owned) → Month Year 3 <input type="checkbox"/> Closed (no new owner or operator), dismantled, or destroyed on → 4 <input type="checkbox"/> Sold or leased to another operator → Give date at right AND enter name, etc., below					
	Name	Store or plant number	Payroll for 1st quarter of 1987 before deductions	Mil.					Thou.	Dol.
	Physical location — Number and street		Total annual payroll for 1987 before deductions				Name of new owner or operator			
	City	State					ZIP	Number and street		
	Census file number	TO IND TAB WT	Total annual payroll for 1987 before deductions				City State ZIP Code			
	GEO	SC TE CCS NID					City State ZIP Code			
	Employer ID number Major activity		Employees (during pay period including March 12, 1987)	(Number)	1 <input type="checkbox"/> In operation 2 <input type="checkbox"/> Idle or inactive (but still owned) → Month Year 3 <input type="checkbox"/> Closed (no new owner or operator), dismantled, or destroyed on → 4 <input type="checkbox"/> Sold or leased to another operator → Give date at right AND enter name, etc., below					
	Name	Store or plant number	Payroll for 1st quarter of 1987 before deductions	Mil.					Thou.	Dol.
	Physical location — Number and street		Total annual payroll for 1987 before deductions				Name of new owner or operator			
	City	State					ZIP	Number and street		
Census file number	TO IND TAB WT	Total annual payroll for 1987 before deductions				City State ZIP Code				
GEO	SC TE CCS NID					City State ZIP Code				
Employer ID number Major activity		Employees (during pay period including March 12, 1987)	(Number)	1 <input type="checkbox"/> In operation 2 <input type="checkbox"/> Idle or inactive (but still owned) → Month Year 3 <input type="checkbox"/> Closed (no new owner or operator), dismantled, or destroyed on → 4 <input type="checkbox"/> Sold or leased to another operator → Give date at right AND enter name, etc., below						
Name	Store or plant number	Payroll for 1st quarter of 1987 before deductions	Mil.					Thou.	Dol.	
Physical location — Number and street		Total annual payroll for 1987 before deductions				Name of new owner or operator				
City	State					ZIP	Number and street			
Census file number	TO IND TAB WT	Total annual payroll for 1987 before deductions				City State ZIP Code				
GEO	SC TE CCS NID					City State ZIP Code				
Employer ID number Major activity		Employees (during pay period including March 12, 1987)	(Number)	1 <input type="checkbox"/> In operation 2 <input type="checkbox"/> Idle or inactive (but still owned) → Month Year 3 <input type="checkbox"/> Closed (no new owner or operator), dismantled, or destroyed on → 4 <input type="checkbox"/> Sold or leased to another operator → Give date at right AND enter name, etc., below						
Name	Store or plant number	Payroll for 1st quarter of 1987 before deductions	Mil.					Thou.	Dol.	
Physical location — Number and street		Total annual payroll for 1987 before deductions				Name of new owner or operator				
City	State					ZIP	Number and street			
Census file number	TO IND TAB WT	Total annual payroll for 1987 before deductions				City State ZIP Code				
GEO	SC TE CCS NID					City State ZIP Code				
Employer ID number Major activity		Employees (during pay period including March 12, 1987)	(Number)	1 <input type="checkbox"/> In operation 2 <input type="checkbox"/> Idle or inactive (but still owned) → Month Year 3 <input type="checkbox"/> Closed (no new owner or operator), dismantled, or destroyed on → 4 <input type="checkbox"/> Sold or leased to another operator → Give date at right AND enter name, etc., below						
Name	Store or plant number	Payroll for 1st quarter of 1987 before deductions	Mil.					Thou.	Dol.	
Physical location — Number and street		Total annual payroll for 1987 before deductions				Name of new owner or operator				
City	State					ZIP	Number and street			
Census file number	TO IND TAB WT	Total annual payroll for 1987 before deductions				City State ZIP Code				
GEO	SC TE CCS NID					City State ZIP Code				
Employer ID number Major activity		Employees (during pay period including March 12, 1987)	(Number)	1 <input type="checkbox"/> In operation 2 <input type="checkbox"/> Idle or inactive (but still owned) → Month Year 3 <input type="checkbox"/> Closed (no new owner or operator), dismantled, or destroyed on → 4 <input type="checkbox"/> Sold or leased to another operator → Give date at right AND enter name, etc., below						
Name	Store or plant number	Payroll for 1st quarter of 1987 before deductions	Mil.					Thou.	Dol.	
Physical location — Number and street		Total annual payroll for 1987 before deductions				Name of new owner or operator				
City	State					ZIP	Number and street			
Census file number	TO IND TAB WT	Total annual payroll for 1987 before deductions				City State ZIP Code				
GEO	SC TE CCS NID					City State ZIP Code				



## DEFINITIONS — INSTRUCTIONS

- **Census File Number** — A Census File Number has been assigned to your company and appears in the upper right corner of the item 5A page. Always refer to the complete number in any correspondence with the Bureau of the Census in order to expedite a reply. Also, be sure to fill in the Census File Number in the upper right corner of the pages used for any entries in item 5B.
- **Employer Identification Number** — The Employer Identification Number is the nine-digit taxpayer identification number assigned by the Internal Revenue Service and used by all business firms and other legal entities to file Federal employment tax returns such as forms 941, 943, or CT-1 and Federal income returns such as forms 1065, 1120, 1120S, and 990 series.
- **Subsidiary** — A company which is owned or controlled by another firm or company. Subsidiaries include firms in which your company owns more than 50 percent of the outstanding voting stock, as well as firms in which your company has the power to direct or cause the direction of the management and policies.
- **Establishment** — A single physical location where business is conducted or where services or industrial operations are performed.
- **Number of Employees During the Pay Period Including March 12, 1987** — All full-time and part-time employees on the payroll during the March 12 pay period.

Include salaried officers and executives if an incorporated firm; do not include proprietors or partners if an unincorporated firm.

- **Payroll** — The gross earnings paid to employees prior to any deductions.

Do not include payments to or withdrawals by proprietors or partners of unincorporated firms.

- **Banks** — The prelisting of your establishments in item 5A should include only the Employer Identification Numbers used to report either Federal employment taxes (IRS Form 941) or income (IRS Forms 1065, 1120, and 990). Employer Identification Numbers assigned to trust funds or estates which are administered by the bank and reported on IRS Form 1041, U.S. Fiduciary Income Tax Return, should not be listed in items 5A or 5B.

FORM **NC-9901 (Item 5B)**  
(9903)

**1987 ECONOMIC CENSUSES**  
**REPORT OF ORGANIZATION**

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

Page \_\_\_\_\_ of \_\_\_\_\_ pages

**PLEASE ENTER YOUR CENSUS FILE NUMBER**  
(See front page)

**YOUR FILE COPY**

---

**Item 5B — LISTING OF ADDITIONAL ESTABLISHMENTS OPERATED BY YOUR COMPANY AND ITS SUBSIDIARIES**

- **Column (a)** — List separately any establishments of your company and its subsidiaries, located in the United States or any of its territories, which are not accounted for in Item 5A or on other report forms in this mailing package, but were in operation or under construction during part or all of 1987.
- **Instructions for questions (e) and (f)** — Answer question (e) for acquired establishments. Complete question (f) entering the date the establishment opened, if not yet in operation, enter the expected opening date and the expected employment.
- **Column (b)** — Complete this column for each listed establishment.
- **Column (c)** — Mark (X) the box which best describes the activity of each establishment. See box codes at right.
- **Column (d)** — Describe major activity or list principal products or services.

**NOTE:** Additional copies of Item 5B are available upon request to Bureau of the Census, 1201 East Tenth Street, Jeffersonville, Indiana 47134. If you prefer, you may use your own paper to list additional establishments; in such instances, however, please follow the same format as shown on the report form. Be sure to enter the item number, your company's name and address, and the Census File Number in the upper right corner of each additional sheet.

**DESCRIPTION AND CODES FOR COLUMN (c)**

<p>1 — Agricultural production</p> <p>2 — Agricultural services</p> <p>3 — Minerals extraction or ore processing</p> <p>4 — Mining services or oil and gas field services</p> <p>5 — Construction</p> <p>6 — Merchant wholesalers</p> <p>7 — Commission merchant/broker/agent</p> <p>8 — Manufacturers' sales branches, manufacturers' sales offices</p> <p>9 — Manufacturing</p> <p>10 — Finance, insurance, or real estate</p> <p>11 — Retail</p> <p>12 — Retail concessions/departments in retail stores</p>	<p>13 — Transportation, communications, and public utilities</p> <p>14 — Legal, educational, or health services</p> <p>15 — Services</p> <p>16 — Central administrative office: accounting, purchasing, legal activities for your own company</p> <p>17 — Other auxiliary establishments such as storage warehouses and research laboratories primarily providing service to your own or affiliated company rather than customers or clients</p> <p>18 — Other — Specify major activity in column (d) below.</p>
---	--

Important

**DO NOT DUPLICATE ESTABLISHMENTS ALREADY PRELISTED IN ITEM 5A**

Line No.

Employer Identification (EI) Number, establishment name, your store or plant number, if any, and address of physical location (including ZIP Code)

1987 establishment data

*Report number of employees and payroll for each establishment (including part-year operations)*

Kind of business activity in 1987

*Major activity Mark (X) one box from the above descriptions*

*Description of major activity or principal products or services*

(a)

Employer Identification Number

Name

Physical location — Number and street

City

State

ZIP Code

(e) Was this establishment acquired from another company?   
☐ Yes — Enter date →    Month    Year  
☐ No

Name and address of former owner or operator

(f) Date establishment opened or is expected to open and expected employment    Month    Year    Expected employment

Employees (during pay period including March 12, 1987) (Number)

Payroll for 1st quarter of 1987 before deductions    Mil.    Thou.    Dol.

Total annual payroll for 1987 before deductions

Census file number    SC    TO    IND    FORM

Census use only    TAB    WT    CCS    OIO

1 ☐ 10 ☐  
2 ☐ 11 ☐  
3 ☐ 12 ☐  
4 ☐ 13 ☐  
5 ☐ 14 ☐  
6 ☐ 15 ☐  
7 ☐ 16 ☐  
8 ☐ 17 ☐  
9 ☐ 18 ☐

(a)

Employer Identification Number

Name

Physical location — Number and street

City

State

ZIP Code

(e) Was this establishment acquired from another company?   
☐ Yes — Enter date →    Month    Year  
☐ No

Name and address of former owner or operator

(f) Date establishment opened or is expected to open and expected employment    Month    Year    Expected employment

Employees (during pay period including March 12, 1987) (Number)

Payroll for 1st quarter of 1987 before deductions    Mil.    Thou.    Dol.

Total annual payroll for 1987 before deductions

Census file number    SC    TO    IND    FORM

Census use only    TAB    WT    CCS    OIO

1 ☐ 10 ☐  
2 ☐ 11 ☐  
3 ☐ 12 ☐  
4 ☐ 13 ☐  
5 ☐ 14 ☐  
6 ☐ 15 ☐  
7 ☐ 16 ☐  
8 ☐ 17 ☐  
9 ☐ 18 ☐

(a)

Employer Identification Number

Name

Physical location — Number and street

City

State

ZIP Code

(e) Was this establishment acquired from another company?   
☐ Yes — Enter date →    Month    Year  
☐ No

Name and address of former owner or operator

(f) Date establishment opened or is expected to open and expected employment    Month    Year    Expected employment

Employees (during pay period including March 12, 1987) (Number)

Payroll for 1st quarter of 1987 before deductions    Mil.    Thou.    Dol.

Total annual payroll for 1987 before deductions

Census file number    SC    TO    IND    FORM

Census use only    TAB    WT    CCS    OIO

1 ☐ 10 ☐  
2 ☐ 11 ☐  
3 ☐ 12 ☐  
4 ☐ 13 ☐  
5 ☐ 14 ☐  
6 ☐ 15 ☐  
7 ☐ 16 ☐  
8 ☐ 17 ☐  
9 ☐ 18 ☐

(a)

Employer Identification Number

Name

Physical location — Number and street

City

State

ZIP Code

(e) Was this establishment acquired from another company?   
☐ Yes — Enter date →    Month    Year  
☐ No

Name and address of former owner or operator

(f) Date establishment opened or is expected to open and expected employment    Month    Year    Expected employment

Employees (during pay period including March 12, 1987) (Number)

Payroll for 1st quarter of 1987 before deductions    Mil.    Thou.    Dol.

Total annual payroll for 1987 before deductions

Census file number    SC    TO    IND    FORM

Census use only    TAB    WT    CCS    OIO

1 ☐ 10 ☐  
2 ☐ 11 ☐  
3 ☐ 12 ☐  
4 ☐ 13 ☐  
5 ☐ 14 ☐  
6 ☐ 15 ☐  
7 ☐ 16 ☐  
8 ☐ 17 ☐  
9 ☐ 18 ☐



U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

**NOTICE** — Response to this inquiry is **required by law (Title 13, U.S. Code)**. By the same law, your report to the Census Bureau is **confidential**. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are **immune from legal process**.

In correspondence pertaining to this report, please refer to this Census File Number (CFN)

## YOUR FILE COPY

CENSUS  
USE  
ONLY

Please correct errors in name, address, and ZIP Code. Enter street and number if not shown.

**Item 1 — Does your organization or any of its subsidiaries have any establishments located in the United States or any of its territories which are not accounted for on other report forms in this mailing package?**

☐ YES — Go to item 2

☐ NO — Complete CERTIFICATION on reverse side and return report

## Item 2 – LISTING OF ADDITIONAL ESTABLISHMENTS

**Column (a)** — Complete this column for each establishment that you list.

**Column (b)** — Mark (X) the box which best describes the major activity of each establishment using the following code box descriptions:

- |  |  |
|--|--|
| <b>1</b> — Agricultural production                                     | <b>11</b> — Retail   |
| <b>2</b> — Agricultural services                                       | <b>12</b> — Retail concessions/departments in retail stores  |
| <b>3</b> — Minerals extraction or ore processing                       | <b>13</b> — Transportation, communications, and public utilities   |
| <b>4</b> — Mining services or oil and gas field services               | <b>14</b> — Legal, educational, or health services   |
| <b>5</b> — Construction  | <b>15</b> — Services   |
| <b>6</b> — Merchant wholesalers  | <b>16</b> — Central administrative office: accounting, purchasing, legal activities for your own company   |
| <b>7</b> — Commission merchant/broker/agent                            | <b>17</b> — Other auxiliary establishments such as storage warehouses and research laboratories primarily providing service to your own or affiliated company rather than customers or clients |
| <b>8</b> — Manufacturers' sales branches, manufacturers' sales offices | <b>18</b> — Other — <i>Specify major activity in column (c) below.</i>   |
| <b>9</b> — Manufacturing   |  |
| <b>10</b> — Finance, insurance, or real estate                         |  |

**Column (c)** — List in order of importance the principal products mined or made; kinds of wholesale or retail business; types of services provided; kinds of construction work done; or the types of crops grown or animals raised, etc.

**Column (d) —** Complete as indicated.

**NOTE — Please return this report form whether or not you report additional establishments.**

[illegible]

**CONTINUE ON REVERSE SIDE**

**Item 2 — LISTING OF ADDITIONAL ESTABLISHMENTS — Continued**

Employer Identification (EI) Number, establishment name, your store or plant number, if any, and address of physical location (including ZIP Code)				Major activity <i>Mark (X) one box from the above descriptions</i>	Description of major activity or principal products or services <i>List in order of importance</i>	Operating status
(a)				(b)	(c)	(d)
Employer Identification Number				1 <input type="checkbox"/> 10 <input type="checkbox"/>		Date establishment opened or is expected to open and expected employment
Name				2 <input type="checkbox"/> 11 <input type="checkbox"/>		Month Year Expected employment
Store or plant number				3 <input type="checkbox"/> 12 <input type="checkbox"/>		
Physical location — Number and street				4 <input type="checkbox"/> 13 <input type="checkbox"/>		Was this establishment acquired from another company?
City				5 <input type="checkbox"/> 14 <input type="checkbox"/>		<input type="checkbox"/> Yes — Enter date —> Month Year
State				6 <input type="checkbox"/> 15 <input type="checkbox"/>		<input type="checkbox"/> No
ZIP Code				7 <input type="checkbox"/> 16 <input type="checkbox"/>		Name and address of former owner or operator
<b>CENSUS USE ONLY</b>				8 <input type="checkbox"/> 17 <input type="checkbox"/>		
Census file number				9 <input type="checkbox"/> 18 <input type="checkbox"/>		
SC TO IND FORM						
TAB WT CCS OID						
Employer Identification Number				1 <input type="checkbox"/> 10 <input type="checkbox"/>		Date establishment opened or is expected to open and expected employment
Name				2 <input type="checkbox"/> 11 <input type="checkbox"/>		Month Year Expected employment
Store or plant number				3 <input type="checkbox"/> 12 <input type="checkbox"/>		
Physical location — Number and street				4 <input type="checkbox"/> 13 <input type="checkbox"/>		Was this establishment acquired from another company?
City				5 <input type="checkbox"/> 14 <input type="checkbox"/>		<input type="checkbox"/> Yes — Enter date —> Month Year
State				6 <input type="checkbox"/> 15 <input type="checkbox"/>		<input type="checkbox"/> No
ZIP Code				7 <input type="checkbox"/> 16 <input type="checkbox"/>		Name and address of former owner or operator
<b>CENSUS USE ONLY</b>				8 <input type="checkbox"/> 17 <input type="checkbox"/>		
Census file number				9 <input type="checkbox"/> 18 <input type="checkbox"/>		
SC TO IND FORM						
TAB WT CCS OID						
Employer Identification Number				1 <input type="checkbox"/> 10 <input type="checkbox"/>		Date establishment opened or is expected to open and expected employment
Name				2 <input type="checkbox"/> 11 <input type="checkbox"/>		Month Year Expected employment
Store or plant number				3 <input type="checkbox"/> 12 <input type="checkbox"/>		
Physical location — Number and street				4 <input type="checkbox"/> 13 <input type="checkbox"/>		Was this establishment acquired from another company?
City				5 <input type="checkbox"/> 14 <input type="checkbox"/>		<input type="checkbox"/> Yes — Enter date —> Month Year
State				6 <input type="checkbox"/> 15 <input type="checkbox"/>		<input type="checkbox"/> No
ZIP Code				7 <input type="checkbox"/> 16 <input type="checkbox"/>		Name and address of former owner or operator
<b>CENSUS USE ONLY</b>				8 <input type="checkbox"/> 17 <input type="checkbox"/>		
Census file number				9 <input type="checkbox"/> 18 <input type="checkbox"/>		
SC TO IND FORM						
TAB WT CCS OID						
Employer Identification Number				1 <input type="checkbox"/> 10 <input type="checkbox"/>		Date establishment opened or is expected to open and expected employment
Name				2 <input type="checkbox"/> 11 <input type="checkbox"/>		Month Year Expected employment
Store or plant number				3 <input type="checkbox"/> 12 <input type="checkbox"/>		
Physical location — Number and street				4 <input type="checkbox"/> 13 <input type="checkbox"/>		Was this establishment acquired from another company?
City				5 <input type="checkbox"/> 14 <input type="checkbox"/>		<input type="checkbox"/> Yes — Enter date —> Month Year
State				6 <input type="checkbox"/> 15 <input type="checkbox"/>		<input type="checkbox"/> No
ZIP Code				7 <input type="checkbox"/> 16 <input type="checkbox"/>		Name and address of former owner or operator
<b>CENSUS USE ONLY</b>				8 <input type="checkbox"/> 17 <input type="checkbox"/>		
Census file number				9 <input type="checkbox"/> 18 <input type="checkbox"/>		
SC TO IND FORM						
TAB WT CCS OID						
Employer Identification Number				1 <input type="checkbox"/> 10 <input type="checkbox"/>		Date establishment opened or is expected to open and expected employment
Name				2 <input type="checkbox"/> 11 <input type="checkbox"/>		Month Year Expected employment
Store or plant number				3 <input type="checkbox"/> 12 <input type="checkbox"/>		
Physical location — Number and street				4 <input type="checkbox"/> 13 <input type="checkbox"/>		Was this establishment acquired from another company?
City				5 <input type="checkbox"/> 14 <input type="checkbox"/>		<input type="checkbox"/> Yes — Enter date —> Month Year
State				6 <input type="checkbox"/> 15 <input type="checkbox"/>		<input type="checkbox"/> No
ZIP Code				7 <input type="checkbox"/> 16 <input type="checkbox"/>		Name and address of former owner or operator
<b>CENSUS USE ONLY</b>				8 <input type="checkbox"/> 17 <input type="checkbox"/>		
Census file number				9 <input type="checkbox"/> 18 <input type="checkbox"/>		
SC TO IND FORM						
TAB WT CCS OID						

**Item 3  
CERTIFICATION**

Name of person to contact regarding this report

Address (if different from label address)

Area code

Telephone number

Extension

This report (including attached continuation pages) is substantially accurate and has been prepared in accordance with instructions.

Signature of authorized person

Title

Date





DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

FORM

**NC-9923**

# 1987 ECONOMIC CENSUSES

## GENERAL SCHEDULE

OMB NO. 0607-0548; Approval Expires December 31, 1988

**NOTICE** — Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Please complete this form and RETURN TO

**BUREAU OF THE CENSUS**  
1201 East Tenth Street  
Jeffersonville, IN 47134

### DUE DATE: 30 DAYS AFTER RECEIPT

The Bureau of the Census is now updating the industrial classifications and physical locations of organizations in the United States. Please answer the questions on this form and return it in the enclosed envelope within 30 days.

**NOTE** — Please read the accompanying instructions before answering the questions.

In correspondence pertaining to this report, please refer to this Census File Number (CFN)

Employer Identification (EI) Number

NC-9923

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

### Item 1 — EMPLOYER IDENTIFICATION NUMBER

Is the Employer Identification (EI) Number shown in the label the SAME as that used for this establishment on its latest 1987 Employer's Quarterly Federal Tax Return, Treasury Form 941?

094 1 ☐ YES

2 ☐ NO — Enter current EI Number →

(9 digits)

### Item 2 — PHYSICAL LOCATION OF ESTABLISHMENT

Answer items a, b, c, and d

**NOTE: P.O. boxes or rural routes are not physical locations.**

a. ☐ Same as shown in mailing label. If different, indicate change. ☒

NUMBER AND STREET

CITY, TOWN, VILLAGE, ETC.

STATE

ZIP CODE

b. Is this establishment physically located inside the legal boundaries of the city, town, village, etc.?

095 1 ☐ YES

2 ☐ NO

3 ☐ No legal boundaries

4 ☐ Don't know

c. Type of municipality where physically located

096 1 ☐ City, village, or borough

2 ☐ Town or township

3 ☐ Other or don't know

d. Name of county where physically located

### Item 4 — SOURCE OF SALES, RECEIPTS, OR REVENUE

List below the principal lines of merchandise sold, construction work done, products produced or services provided, and indicate the approximate percentage each was of the total dollar volume of business in 1987 as reported in item 3 (e.g., gasoline 85%, auto repairs 10%, oil 5%).

Source	Percent
	%
	%
	%
	%
	%
	%
	%
<b>TOTAL — Should equal 100%</b>	<b>100 %</b>

### Item 5 — MATERIALS CONSUMED

If you are a manufacturer, list the primary materials consumed in producing the manufactured products.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Item 6 — CLASS OF CUSTOMER

To whom do you sell most of your products or provide your services?

- To the general public (household consumers and individuals)..... 1 ☐
- To retail or wholesale establishments..... 2 ☐
- To construction contractors..... 3 ☐
- To institutional, industrial, commercial, professional, government, or farm users..... 4 ☐
- Other customers — Specify \_\_\_\_\_ 5 ☐

### HOW TO REPORT DOLLAR FIGURES

Value figures may be reported in dollars or rounded to thousands.

Example: If a figure is \$1,125,628, report either **Preferred** 1,126 or **Acceptable** 1,125,628

Mil- lions (000)	Thou- sands (000)	Dol- lars (000)
1	126	
1	125	628

### Item 3 — DOLLAR VOLUME OF BUSINESS IN 1987

Sales of merchandise and other operating receipts/revenues EXCLUDING sales (or other) taxes collected

Mil.	Thou.	Dol.
010		

### Item 7 — REMARKS

PENALTY FOR FAILURE TO REPORT

CONTINUE ON PAGE 2 →

**Item 8 — BUSINESS OR ACTIVITY**

Mark (X) the **ONE** box which best describes the **PRINCIPAL** activity of this establishment in 1987.

070 881100 2 ☐ **Private household** (employing domestic help, e.g., cooks, maids, gardeners, secretaries, etc.)

**RETAIL TRADE (R)**

- 653120 7 ☐ Automotive and home supply store  
 581300 1 ☐ Bar or tavern  
 581230 0 ☐ Cafeteria  
 573230 0 ☐ Computer and software store  
 581250 8 ☐ Contract feeding  
 541120 2 ☐ Convenience food store  
 554110 7 ☐ Gasoline service station  
 594700 7 ☐ Gift, novelty, or souvenir shop  
 541110 3 ☐ Grocery store  
 581260 7 ☐ Ice cream/frozen yogurt stand  
 592100 2 ☐ Liquor store  
 581210 2 ☐ Restaurant (full service)  
 581240 9 ☐ Restaurant (limited menu, e.g., fast food)  
 581220 1 ☐ Social caterer  
 553110 8 ☐ Tire, battery, and accessory store  
 554120 6 ☐ Truck stop  
 999999 6 ☐ Other kind of retail business — Specify type ↴

**SERVICE (S)**

- 893100 8 ☐ Accounting, auditing, or bookkeeping service  
 891110 9 ☐ Architectural service  
 811110 6 ☐ Attorney's office  
 753100 7 ☐ Automotive body shop, except paint shop  
 753810 1 ☐ Automotive repair shop, general  
 723100 4 ☐ Beauty shop  
 734900 4 ☐ Building cleaning, maintenance, and janitorial service  
 835100 9 ☐ Child day care service  
 866100 1 ☐ Church, synagogue, convent, monastery, etc.  
 864100 3 ☐ Civic, social, or fraternal association  
 737920 9 ☐ Computer maintenance and repair  
 737910 0 ☐ Computer rental or leasing  
 739210 3 ☐ Construction management service  
 737210 5 ☐ Custom computer programming service  
 802100 8 ☐ Dentist's office  
 739240 0 ☐ Economic and sociological research service  
 891120 8 ☐ Engineering service  
 863100 4 ☐ Labor union or organization  
 739210 3 ☐ Management and administrative service  
 739230 1 ☐ Management consulting service  
 801110 8 ☐ Medical doctor's office (M.D. degree only)  
 701130 7 ☐ Motel or tourist court  
 733200 0 ☐ Photocopy service  
 737220 4 ☐ Prepackaged computer software  
 739220 2 ☐ Public relations service  
 891130 7 ☐ Surveying service  
 739450 5 ☐ Video tape rental  
 769200 7 ☐ Welding repair  
 999999 6 ☐ Other kind of service — Specify type ↴

**WHOLESALE TRADE (W)**

- 515300 2 ☐ Country or terminal grain elevator wholesaler  
 514100 7 ☐ General line grocery wholesaler  
 517111 1 ☐ Petroleum bulk plant or terminal wholesaler

- ☐ Agent or broker  
☐ Merchant wholesaler  
☐ Other type of wholesaler — Specify type ↴

**FINANCE, INSURANCE, AND REAL ESTATE (F)**

- 641100 3 ☐ Insurance agent or broker  
 651300 6 ☐ Owner-operator of apartment building  
 637100 9 ☐ Pension, health, or welfare fund  
 653100 8 ☐ Real estate agent or manager  
 655200 4 ☐ Subdivider and developer, except cemetery  
 673200 2 ☐ Trust: Educational, religious, and charitable  
 673300 0 ☐ Trust, except educational, religious, and charitable  
 999999 6 ☐ Other kind of finance, insurance, or real estate — Specify type ↴

**TRANSPORTATION (T)****Local trucking without storage**

- 421240 3 ☐ Agricultural products  
 421270 9 ☐ Dump trucking  
 421260 1 ☐ Garbage and trash collection  
 421220 5 ☐ General freight trucking  
 421230 4 ☐ Hazardous waste trucking  
 421210 6 ☐ Household goods moving  
 421250 2 ☐ Messenger service, except telephone and radio telephone  
 421250 2 ☐ Parcel delivery service (including parcel courier service)  
 421290 8 ☐ Other specialized local trucking — Specify type ↴

**Trucking, except local**

- 421340 1 ☐ Agricultural products  
 421320 3 ☐ General freight trucking  
 421330 2 ☐ Hazardous waste trucking  
 421310 4 ☐ Household goods moving  
 421350 0 ☐ Parcel delivery service (including parcel courier service)  
 421390 6 ☐ Other specialized trucking — Specify type ↴

**Local trucking with storage**

- 421410 2 ☐ Household goods moving  
 421490 4 ☐ Other local trucking with storage — Specify type ↴

**Water transportation service**

- 446910 2 ☐ Marina  
 446990 4 ☐ Other water transportation service — Specify type ↴

**CONSTRUCTION (C)****Building construction — general contractor**

- 152100 4 ☐ Single-family housing construction  
 999999 6 ☐ Other building construction — Specify type ↴

**Heavy construction contractor**

- 161190 4 ☐ Highway and street construction  
 999999 6 ☐ Other heavy construction — Specify type ↴

**Special trade contractor**

- 1751007 ☐ Carpentry contractor  
 1731009 ☐ Electrical contractor  
 1721000 ☐ Painting contractor  
 1711001 ☐ Plumbing, heating, or air conditioning contractor  
 9999996 ☐ Other special trade contractor — Specify type ↴

**MANUFACTURING (M)**

- 275200 4 ☐ Instant or quick print, except photocopy service  
 999999 6 ☐ Other commercial printing — Specify type ↴

- 359900 8 ☐ Machine shop, jobbing and repair  
 999999 6 ☐ Other manufacturing — Specify type ↴

- ☐ **AGRICULTURAL PRODUCTION**  
☐ **AGRICULTURAL SERVICE**  
☐ **MINERAL EXTRACTION**  
☐ **MINERAL SERVICE**  
☐ **OTHER BUSINESS OR ACTIVITY** — Specify type ↴

**Item 9 — CERTIFICATION** — This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report — Print or type	Telephone —→	Area code	Number	Extension
Signature of authorized person	Date			





U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

FORM

**ES-9100**

**1987 ECONOMIC CENSUSES**

**ENTERPRISE SUMMARY REPORT**

OMB No. 0607-0569; Approval Expires June 30, 1989

**NOTICE** — Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is **confidential**. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are **immune from legal process**.

In correspondence pertaining to this report, please refer to this Census File Number (CFN)

**ES-9100**

Please complete this form and RETURN TO

**BUREAU OF THE CENSUS**  
1201 East Tenth Street  
Jeffersonville, IN 47134

**DUE DATE: FEBRUARY 15, 1988**

If filing by the due date causes an undue burden, a time extension request should be sent to the above address; please include your 11-digit Census File Number (CFN).

**NOTE** — Please read the instructions before answering the questions.

901	902	903
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Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

**IMPORTANT — This is an enterprise summary report**

**PURPOSE OF THIS FORM**

- The purpose of this form is to obtain consolidated information for domestic activities of your enterprise.

**WHAT IS AN ENTERPRISE?**

- An enterprise is a business, service, or membership organization consisting of one or more establishments under common ownership or control.
- It includes all establishments of subsidiary companies, where there is more than 50 percent ownership, as well as establishments of firms which the enterprise has the power to direct or cause the direction of management and policies.
- An enterprise may vary in composition ranging from a single legal entity (e.g., corporation, partnership, etc.) to a complex family of legal entities under common ownership or control.

**WHAT SHOULD BE REPORTED?**

- Report for all establishments of your firm. Include operating locations, administrative offices, and sales offices owned or controlled by this enterprise and its subsidiaries.
- Include your enterprise's activities in all 50 states and the District of Columbia. Do not include activities in foreign countries or U.S. possessions such as Puerto Rico, Guam, etc., except for reporting foreign assets on line 36.
- Include subsidiaries whether or not they are consolidated in your enterprise's books.
- Report consolidated information. Exclude domestic intra-enterprise transfers.
- Report for the 1987 calendar year. If calendar year records are not available, fiscal year reports for the period ending between October 31, 1987 and February 29, 1988 are acceptable. Be sure to complete every item. If book figures are not readily available, enter your best estimates. Enter "0" in items where appropriate.
- Generally Accepted Accounting Principles (GAAP) should be followed when filling out this form.
- For assistance in completing this form, call the Census Bureau's Enterprise Statistics Branch (301) 763-1758.

**HOW TO REPORT DOLLAR FIGURES**

Value figures may be reported in dollars or rounded to thousands.

Example: If a figure is \$1,179,125,628, report either

• **PREFERRED** .....  
**Acceptable** .....

Bil- lions (000)	Mil- lions (000)	Thou- sands (000)	Dol- lars (000)
1	179	126	
1	179	125	628

**PENALTY FOR FAILURE TO REPORT**

**CONTINUE ON PAGE 2** →

**Item A — SALES AND OPERATING RECEIPTS DURING 1987**

**INCLUDE**

- Operating receipts from taxable operations as well as total revenues from tax-exempt activities
- Assets sold under a capital lease agreement
- Export transfers to your foreign subsidiaries

**EXCLUDE**

- Sales and other taxes collected and paid directly to government taxing agencies
- Domestic intra-enterprise transfers
- Sales by foreign subsidiaries
- Nonoperating income

Bil.	Mil.	Thou.	Dol.
011			

**1. Consolidated SALES and operating receipts (net of taxes)** .....

**2. Did this enterprise sell depreciable assets to others through capital leases during 1987?** <sup>630</sup> 1 ☐ YES — Report amount  
2 ☐ NO — SKIP to Item B

631			
-----	--	--	--

A capital lease is an agreement where the lessee acquires equity in the assets. Accounting rules generally require that owned assets "sold" or transferred through capital leases be treated as SALES for the year in which they are leased. If your enterprise owned assets that were leased to others under a capital lease agreement in 1987, report these "sales" at the fair market value of the assets when they were leased.

**3. Is the amount of leased assets "sold" reported in line 2 also included in line 1?** <sup>632</sup> 1 ☐ YES  
2 ☐ NO

**Item B — EMPLOYMENT AND PAYROLL DURING 1987**

*Include full and part-time employees and their pre-tax wages and salaries (gross earnings) as defined on Treasury Form 941, Employers Quarterly Federal Tax Return. Include salaried officers and executives of incorporated firms and payments made to them. Exclude proprietors or partners of unincorporated firms and their payments.*

Number
032

**4. Number of paid EMPLOYEES for the pay period including March 12, 1987** .....

*Report all employees including persons on paid sick leave, paid holidays, and paid vacations.*

**Payroll:**

*Report gross earnings paid to employees prior to such deductions as employee's social security contributions, withholding taxes, group insurance premiums, union dues, and savings bonds. Gross earnings include all wages, salaries, commissions, dismissal pay, paid bonuses, vacation and sick leave pay, and the cash equivalent of compensation paid in kind. Exclude employer's costs for fringe benefits.*

Bil.	Mil.	Thou.	Dol.
031			

**5. FIRST QUARTER payroll** .....

030			
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**6. TOTAL ANNUAL payroll** .....

**Item C — EMPLOYER'S COST FOR FRINGE BENEFITS DURING 1987 (SUPPLEMENTAL LABOR COSTS)**

Bil.	Mil.	Thou.	Dol.
101			

**7. Legally required programs** .....

*For example: Employer's social security tax, unemployment tax, workmen's compensation insurance, and state disability insurance programs.*

102			
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**8. Voluntary programs** .....

*For example: Premiums on life insurance, hospital and medical plans; pension plans, union negotiated benefits; welfare plans; and stock purchase plans.*

103			
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**9. TOTAL FRINGE BENEFITS (SUM of lines 7 and 8)** .....



Please enter your 11-digit Census File Number (CFN) from the address label on page 1

### Item D — INVENTORIES

Report consolidated information concerning all of the inventories which are owned by your enterprise, and located within the United States. The SUM of the inventories of all domestic establishments of your enterprise should be approximately equal to the TOTAL inventory of your enterprise after adjusting for valuation differences.

#### INCLUDE

- Finished products; work in process; materials, supplies, fuels, etc., for resale or further fabrication
- Inventories in transit for which your enterprise has taken title

#### EXCLUDE

- Inventories owned by others but held by your enterprise
- Items not held for resale, such as fixtures, equipment, and supplies

**NOTE:** Progress billings **should not** be deducted from the reported amounts.

10. Did this enterprise have inventories at the end of 1986? 200 1 ☐ YES  
2 ☐ NO — SKIP to line 16

11. Total inventories at cost or market value for the year ending 1986, using generally accepted accounting principles. (For inventories at LIFO cost, use the SUM of the LIFO value PLUS the LIFO reserve.)

Bil.	Mil.	Thou.	Dol.
210			

12. Inventories reported on line 11 which are NOT subject to LIFO costing for the year ending 1986

240			
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13. Did this enterprise have inventories at LIFO cost at the end of 1986? 220 1 ☐ YES  
2 ☐ NO — SKIP to line 16

14. Inventories which are subject to LIFO costing in 1986 (gross)  
(Report the SUM of LIFO value PLUS the LIFO reserve.)

230			
-----	--	--	--

Bil.	Mil.	Thou.	Dol.
232			

- 15a. LIFO reserves associated with the inventories on line 14

231			
-----	--	--	--

- b. LIFO value of inventories reported on line 14 (net)

**PLEASE VERIFY — SUM of lines 15a and 15b should equal line 14.  
SUM of lines 12 and 14 should equal line 11.**

16. Did this enterprise have inventories at the end of 1987? 250 1 ☐ YES  
2 ☐ NO — SKIP to Item E

17. Total inventories at cost or market value for the year ending 1987, using generally accepted accounting principles. (For inventories at LIFO cost, use the SUM of the LIFO value PLUS the LIFO reserve.)

Bil.	Mil.	Thou.	Dol.
260			

18. Inventories reported on line 17 which are NOT subject to LIFO costing for the year ending 1987

290			
-----	--	--	--

19. Did this enterprise have inventories at LIFO cost at the end of 1987? 270 1 ☐ YES  
2 ☐ NO — SKIP to Item E

20. Inventories which are subject to LIFO costing in 1987 (gross)  
(Report the SUM of LIFO value PLUS the LIFO reserve.)

280			
-----	--	--	--

Bil.	Mil.	Thou.	Dol.
282			

- 21a. LIFO reserves associated with the inventories on line 20

281			
-----	--	--	--

- b. LIFO value of inventories reported on line 20 (net)

**PLEASE VERIFY — SUM of lines 21a and 21b should equal line 20.  
SUM of lines 18 and 20 should equal line 17.**

**Item E — DEPRECIABLE ASSETS AND CHANGES IN DEPRECIABLE ASSET ACCOUNTS DURING 1987**

Report the gross cost of assets for which depreciation or amortization accounts are ordinarily maintained. Gross cost represents the acquisition cost to your enterprise.

**INCLUDE**

- Depreciable assets (buildings, structures, machinery, equipment, etc.) and amortizable assets (special tools, film, etc.) as reported in Item H.
- Cost of depreciable assets owned by this enterprise, but rented or leased to others under an operating lease agreement
- Cost of all capitalized drilling and completion costs
- Cost of depreciable assets obtained through capital leases

**EXCLUDE**

- Cost of land and depletable assets such as timber and mineral rights, including producing or nonproducing leases, bonus payments, royalties and overriding mineral interests, and fee land (Include on line 35.)
- Current assets (inventories, cash, accounts receivable, etc.,) and intangible assets (goodwill, patents, copyrights, etc.) (Include on line 35.)
- Cost of depreciable assets in foreign countries and U.S. possessions (Include on line 36.)
- Cost of depreciable assets leased to others under a capital lease agreement

**22. DEPRECIABLE ASSETS, at the END OF 1986**

a. Buildings and structures .....

b. Machinery and equipment .....

c. Other depreciable assets .....

Please describe ☒

304

Bil.	Mil.	Thou.	Dol.
301			
302			
303			

**23. TOTAL DEPRECIABLE ASSETS, at the end of 1986**

(SUM of lines 22a through 22c) .....

**24. TOTAL CAPITAL EXPENDITURES during 1987 including all costs that are capitalized to asset accounts and for which depreciation or amortization reserves are maintained (See Item H for further instructions) .....****25. OTHER ADDITIONS and acquisitions made (at fair market value) by your enterprise during 1987. If mergers and acquisitions are not treated as a "pooling of interests," enter the fair market value on this line. ....****26. DEDUCTIONS from depreciable asset accounts for assets sold, retired, scrapped, destroyed, etc., during 1987 .....****27. DEPRECIABLE ASSETS, at the END OF 1987**

a. Buildings and structures .....

b. Machinery and equipment .....

c. Other depreciable assets .....

Please describe ☒

354

Bil.	Mil.	Thou.	Dol.
351			
352			
353			

**28. TOTAL DEPRECIABLE ASSETS, at the end of 1987**

(SUM of lines 27a through 27c) .....

**PLEASE RECONCILE — SUM of lines 23 through 25 MINUS line 26 should equal line 28. If not, explain in the remarks section.**

Bil.	Mil.	Thou.	Dol.
305			

333			
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334			
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335			
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355			
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**Item F — CHANGES IN ACCUMULATED DEPRECIATION DURING 1987****INCLUDE**

- Total depreciation and amortization for the assets included in lines 22 through 28
- Additions made to the accumulated depreciation and amortization accounts during 1987 for assets owned at the beginning of the year or acquired during the year

**EXCLUDE**

- Reserves for intangible assets
- Depreciation of assets held in foreign countries and U.S. possessions

**29. ACCUMULATED DEPRECIATION AND AMORTIZATION at the end of 1986**

Bil.	Mil.	Thou.	Dol.
451			

**30. DEPRECIATION AND AMORTIZATION EXPENSE charged to income during 1987**

452			
-----	--	--	--

**31. OTHER ADDITIONS to the accumulated depreciation and amortization accounts during 1987**

453			
-----	--	--	--

**32. DEDUCTIONS from the accumulated depreciation and amortization accounts due to sales, retirements, renewals, and replacements during 1987**

454			)
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**33. ACCUMULATED DEPRECIATION AND AMORTIZATION at the end of 1987***(SUM of lines 29 through 31 MINUS line 32)*

455			
-----	--	--	--

**Item G — TOTAL ASSETS, AT THE END OF 1987***NOTE: Report total assets on a consolidated basis.***34. NET DEPRECIABLE ASSETS***(Should equal line 28 MINUS line 33)  
Include only domestic assets.*

Bil.	Mil.	Thou.	Dol.
501			

**35. CURRENT AND OTHER ASSETS****INCLUDE**

- Current and other domestic assets for which depreciation or amortization reserves are NOT maintained, such as inventories, cash, investments, accounts receivable, etc.
- Land, depletable and intangible assets such as timber, mineral rights, goodwill, patents, copyrights, etc. Report all other assets net of all reserves and allowances.

502			
-----	--	--	--

**36. FOREIGN ASSETS***Include all assets in foreign countries and U.S. possessions, regardless of type. Report net of all reserves, allowances, and accumulated depreciation.*

503			
-----	--	--	--

**37. TOTAL ASSETS, at the end of 1987***(SUM of lines 34 through 36)*

504			
-----	--	--	--

**Item H — CAPITAL EXPENDITURES DURING 1987 (Excluding land and mineral rights)****INCLUDE**

- All costs that are capitalized to asset accounts and for which depreciation or amortization reserves are maintained
- All assets obtained through a capital lease

**EXCLUDE**

- Cost of land and mineral rights, such as producing and nonproducing leases
- Cost of maintenance and repairs charged as current operating expenses
- Capital expenditures by subsidiaries in foreign countries and U.S. possessions

**38. NEW MACHINERY AND EQUIPMENT**

a. New automobiles, trucks, trailers, special purpose vehicles, etc., for highway use .....

Bil.	Mil.	Thou.	Dol.
401			

b. New computers and peripheral data processing equipment .....

Bil.	Mil.	Thou.	Dol.
402			

c. All other expenditures for new machinery and equipment  
Include production machinery, office equipment, and special tools having useful life of more than one year. Report replacements as well as additions to capacity. ....

Bil.	Mil.	Thou.	Dol.
403			

Bil.	Mil.	Thou.	Dol.
404			

**39. TOTAL new machinery and equipment (SUM of lines 38a through 38c) .....****40. New buildings, structures, and additions to plant**

Include new construction, major alterations, capitalized repairs, and improvement of buildings both completed and in progress but not completed at the end of 1987. Include expenditures for structures which, on completion, will be sold and leased back to your enterprise. ....

Bil.	Mil.	Thou.	Dol.
405			

Bil.	Mil.	Thou.	Dol.
406			

**41. USED plant and used equipment acquired from others .....****42. Capitalized development and exploration of mineral properties**

Include capitalized expenditures for oil and gas field and other mineral property explorations; for the drilling of oil, gas, dry, and service wells; and for tangible assets. ....

Bil.	Mil.	Thou.	Dol.
407			

Bil.	Mil.	Thou.	Dol.
408			

**43. Other capital expenditures**

Please describe 7

409

Bil.	Mil.	Thou.	Dol.
410			

**44. TOTAL CAPITAL EXPENDITURES (SUM of lines 39 through 43) .....**

**PLEASE VERIFY — Line 44 should be the same as on line 24. If not, explain in the remarks section.**

**Item I — CAPITAL LEASES DURING 1987 — ACQUISITION COST****INCLUDE**

- Costs of assets obtained through a capital lease agreement from others during 1987, at fair market value (also include in Item H)

**EXCLUDE**

- Assets obtained through operating leases
- Assets leased to others under a capital lease agreement

45. Did this enterprise acquire assets through capital leases during 1987? .....

610 1 ☐ YES — Report asset cost  
2 ☐ NO — Skip to Item J

Bil.	Mil.	Thou.	Dol.
611			

46. Are these capital lease acquisitions included in Item H? .....

612 1 ☐ YES  
2 ☐ NO

**Item J — ASSETS ACQUIRED AND LEASED DURING 1987**

47. Did this enterprise acquire depreciable assets during 1987 that were leased to others under an OPERATING lease agreement? .....

620 1 ☐ YES — Report asset cost  
2 ☐ NO — SKIP to Item K

Bil.	Mil.	Thou.	Dol.
621			

48. Are these operating lease expenditures included in Item H? .....

622 1 ☐ YES  
2 ☐ NO



**Item K — RENTAL PAYMENTS DURING 1987**

*Include payments made to others for use of buildings and structures (including land and office space), machinery and equipment. Exclude payments for assets obtained through a capital lease (the acquisition value of these assets should be reported in Item H and Item I).*

49. Did this enterprise make rental payments to others during 1987? 550 1 ☐ YES  
2 ☐ NO — SKIP to Item L

Bil.	Mil.	Thou.	Dol.
551			

50. Rental payments for use of buildings and structures .....

552			
-----	--	--	--

51. Rental payments for use of machinery and equipment .....

553			
-----	--	--	--

52. Other rental payments .....

Please describe ↘

554

53. TOTAL RENTAL PAYMENTS  
(SUM of lines 50 through 52) .....

555			
-----	--	--	--

**Item L — ROYALTY PAYMENTS DURING 1987**

54. Did this enterprise make royalty payments during 1987? Include payments to unaffiliated organizations or individuals for the use of intangible property rights including patents, trademarks, copyrights, use of natural resources, etc.

670 1 ☐ YES — Report amount →  
2 ☐ NO

Bil.	Mil.	Thou.	Dol.
671			

**Item M — ADVERTISING SERVICES DURING 1987**

55. Did this enterprise purchase advertising during 1987? Include services from others including payments for printing, media coverage, and other services and materials.

680 1 ☐ YES — Report amount →  
2 ☐ NO

Bil.	Mil.	Thou.	Dol.
682			

**REMARKS** — Please use this space for any explanations that may be essential in understanding your reported data.

**Item N — CERTIFICATION** — This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report — Print or type 950				Period covered by this report	FROM: Mo.   Year	TO: Mo.   Year
951 Telephone →	Area code	Number	Extension	Signature of authorized person		Date

FORM ES-9100

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

FORM

**ES-9200****1987 ECONOMIC CENSUSES**  
**AUXILIARY ESTABLISHMENT REPORT**

OMB No. 0607-0571: Approval Expires June 30, 1989

**NOTICE** — Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

**Please complete this form and RETURN TO****BUREAU OF THE CENSUS**  
1201 East Tenth Street  
Jeffersonville, IN 47134**DUE DATE: FEBRUARY 15, 1988**

If you cannot file by the due date, a time extension request should be sent to the above address; please include your 11-digit Census File Number (CFN).

**Note** — Please read the instructions before answering the questions.

S01	S02	S03	S04
-----	-----	-----	-----

In correspondence pertaining to this report, please refer to this Census File Number (CFN)

Employer Identification (EI) Number

**ES-9200**

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

**IMPORTANT — Please read****GENERAL INSTRUCTIONS****Who should report?**

- All auxiliary establishments which were operated during any part of 1987.

**What is an auxiliary establishment?**

- An establishment primarily engaged in performing management, supervision, general administrative functions, and supporting services for other establishments of the same enterprise, rather than for the general public or other business firms.

Examples of auxiliary establishments: Central offices, corporate offices, regional offices, accounting offices; research, development, and testing laboratories; central repair shops; warehouses; computer centers; etc.

**What should you report?**

- Report only for the activities of this auxiliary establishment. EXCLUDE all operating activities which produce goods or services reported on another 1987 Economic Censuses report form (i.e., manufacturing, selling, etc.).
- If book figures are not readily available, carefully prepared estimates for data items are acceptable for statistical purposes.
- Be sure to complete every item. Enter "0" in items where appropriate.

**What is an enterprise?**

- An enterprise consists of a parent firm and all its establishments and subsidiaries under common ownership or control.

**Item 1 — EMPLOYER IDENTIFICATION NUMBER**

Is the Employer Identification (EI) Number shown in the label the SAME as that used for this establishment on its latest 1987 Employer's Quarterly Federal Tax Return, Treasury Form 941?

094 1 ☐ YES

2 ☐ NO — Enter current EI Number (9 digits)

**Item 2 — PHYSICAL LOCATION OF ESTABLISHMENT**

Answer items a, b, c, and d

**NOTE:** P.O. boxes or rural routes are not physical locations.

- a. ☐ Same as shown in mailing label. If different, indicate change. ☒

NUMBER AND STREET		
CITY, TOWN, VILLAGE, ETC.		
STATE	ZIP CODE	

- b. Is this establishment physically located inside the legal boundaries of the city, town, village, etc.?

095 1 ☐ YES 3 ☐ No legal boundaries

2 ☐ NO 4 ☐ Don't know

- c. Type of municipality where physically located

098 1 ☐ City, village, or borough 3 ☐ Other or don't know

2 ☐ Town or township

- d. Name of county where physically located

**Item 3 — OPERATIONAL STATUS**

Number of months  
002

- a. How many months during 1987 did this firm or organization actively operate this establishment?

- b. Mark (X) the ONE box which best describes this establishment at the end of 1987.

001 1 ☐ In operation

2 ☐ Temporarily or seasonally inactive

3 ☐ Ceased operation — Give date →

4 ☐ Sold or leased to another operator — Give date at right → AND enter name, etc., below

Figures only		
Month	Day	Year

NAME OF NEW OWNER OR OPERATOR		
NUMBER AND STREET		
CITY	STATE	ZIP CODE

**Item 4 — EMPLOYMENT BY FUNCTION**

List both full- and part-time employees as defined on Treasury Form 941 at this auxiliary location, by each employee's primary function.

- Exclude**
- Employees working in or from other establishments, even though paid from this location
  - Proprietors or partners if an unincorporated firm

- a. Employment by function for pay period including March 12, 1987. (Where records do not provide actual employee counts in terms of the functions listed, estimates of the approximate number in each are acceptable. Those performing a variety of functions should be reported in their primary activity during the pay period.)

- |  | Number |
|--|--------|
| (1) Administrative and managerial employees (Exclude employees engaged in office and clerical work.)                                 | 015    |
| (2) Office and clerical employees — except sales support   | 016    |
| (3) Research, development, and testing employees   | 017    |
| (4) Warehousing employees  | 018    |
| (5) Trucking employees   | 019    |
| (6) Communication employees (including telephone and telecommunication)  | 020    |
| (7) Repair service employees   | 021    |
| (8) Electronic data processing employees (Include programming and systems design.)   | 022    |
| (9) Sales employees selling directly to customers from this location   | 023    |
| (10) Sales support employees (Include office and clerical, and other employees directly supporting the sales personnel in line (9).) | 024    |
| (11) Other employees — Specify   | 025    |
|  | 032    |

**b. TOTAL March 12 employment — Sum of lines (1) through (11)****HOW TO REPORT DOLLAR FIGURES**

Value figures may be reported in dollars or rounded to thousands.

Example: If a figure is \$1,125,628, report either

**PREFERRED**  
Acceptable

Mil- lions (000)	Thou- sands (000)	Dol- lars (000)
1	125	028

**Item 5 — PAYROLL IN 1987, BEFORE DEDUCTIONS**

Report total payroll of all employees as defined on Treasury Form 941.

- Include**
- Gross earnings paid to employees prior to such deductions as:
    - Employee's Social Security contributions
    - Withholding taxes
    - Group insurance premiums
    - Union dues
    - Savings bonds
  - All wages and salaries including:
    - Commissions and paid bonuses
    - Dismissal pay
    - Vacation and sick pay
    - Cash equivalent of compensation paid in kind
    - Salaries of officers if a corporation

- Exclude**
- Payments to proprietors or partners if an unincorporated concern
  - Employer's cost for fringe benefits

**Item 6 — EMPLOYER'S COST FOR FRINGE BENEFITS IN 1987 (Supplemental Labor Costs)**

- LEGALLY REQUIRED** — For example:
- Employer's Social Security tax
  - Unemployment tax
  - Workmen's compensation insurance
  - State disability insurance programs

- VOLUNTARY PROGRAMS** — For example:
- Union negotiated benefits
  - Life insurance premiums
  - Pension plans and welfare plans
  - Insurance premiums on hospital and medical plans
  - Stock purchase plans

**a. TOTAL ANNUAL PAYROLL**

030

Mil.	Thou.	Dol.
030		

Mil.	Thou.	Dol.
031		

Mil.	Thou.	Dol.
032		

Mil.	Thou.	Dol.
033		

Mil.	Thou.	Dol.
034		

Mil.	Thou.	Dol.
035		

Mil.	Thou.	Dol.
036		

Mil.	Thou.	Dol.
037		

Mil.	Thou.	Dol.
038		

Mil.	Thou.	Dol.
039		

Mil.	Thou.	Dol.
040		

Mil.	Thou.	Dol.
041		

Mil.	Thou.	Dol.
042		

Mil.	Thou.	Dol.
043		

Mil.	Thou.	Dol.
044		

Mil.	Thou.	Dol.
045		

Mil.	Thou.	Dol.
046		

Mil.	Thou.	Dol.
047		

Mil.	Thou.	Dol.
048		

Mil.	Thou.	Dol.
049		

Mil.	Thou.	Dol.
050		

Mil.	Thou.	Dol.
051		

Mil.	Thou.	Dol.
052		

Mil.	Thou.	Dol.
053		

Mil.	Thou.	Dol.
054		

Mil.	Thou.	Dol.
055		

Mil.	Thou.	Dol.
056		

Mil.	Thou.	Dol.
057		

Mil.	Thou.	Dol.
058		

Mil.	Thou.	Dol.
059		

Mil.	Thou.	Dol.
060		

Mil.	Thou.	Dol.
061		

Mil.	Thou.	Dol.
062		

Mil.	Thou.	Dol.
063		

Mil.	Thou.	Dol.
064		

Mil.	Thou.	Dol.
065		

Mil.	Thou.	Dol.
066		

Mil.	Thou.	Dol.
067		

Mil.	Thou.	Dol.
068		

Mil.	Thou.	Dol.
069		

Mil.	Thou.	Dol.
070		

Mil.	Thou.	Dol.
071		

Mil.	Thou.	Dol.
072		

Mil.	Thou.	Dol.
073		

Mil.	Thou.	Dol.
074		

Mil.	Thou.	Dol.
075		

Mil.	Thou.	Dol.
076		

Mil.	Thou.	Dol.
077		

Mil.	Thou.	Dol.
078		

Mil.	Thou.	Dol.
079		

Mil.	Thou.	Dol.
080		

Mil.	Thou.	Dol.
081		

Mil.	Thou.	Dol.
082		

Mil.	Thou.	Dol.
083		

Mil.	Thou.	Dol.
084		

Mil.	Thou.	Dol.
085		

Mil.	Thou.	Dol.
086		

Mil.	Thou.	Dol.
087		

Mil.	Thou.	Dol.
088		

Mil.	Thou.	Dol.
089		

Mil.	Thou.	Dol.
090		

Mil.	Thou.	Dol.
091		

Mil.	Thou.	Dol.
092		

Mil.	Thou.	Dol.
093		

Mil.	Thou.	Dol.
094		

Mil.	Thou.	Dol.
095		

Mil.	Thou.	Dol.
096		

Mil.	Thou.	Dol.
097		

Mil.	Thou.	Dol.
098		

Mil.	Thou.	Dol.
099		

Mil.	Thou.	Dol.
100		

Mil.	Thou.	Dol.
101		

Mil.	Thou.	Dol.
102		

Mil.	Thou.	Dol.
103		

Mil.	Thou.	Dol.
104		

Mil.	Thou.	Dol.
105		

Mil.	Thou.	Dol.
106		

Mil.	Thou.	Dol.
107		

Mil.	Thou.	Dol.
108		

Mil.	Thou.	Dol.
109		

Mil.	Thou.	Dol.
110		

Mil.	Thou.	Dol.
111		

Mil.	Thou.	Dol.
112		

Mil.	Thou.	Dol.
113		

Mil.	Thou.	Dol.
114		

Mil.	Thou.	Dol.
115		

Mil.	Thou.	Dol.
116		

Mil.	Thou.	Dol.
117		

Mil.	Thou.	Dol.
118		

Mil.	Thou.	Dol.
119		

Mil.	Thou.	Dol.
120		

Mil.	Thou.	Dol.
121		

Mil.	Thou.	Dol.
122		

Mil.	Thou.	Dol.
123		

Mil.	Thou.	Dol.
124		

Mil.	Thou.	Dol.
125		

Mil.	Thou.	Dol.
126		

Mil.	Thou.	Dol.
127		

Mil.	Thou.	Dol.
128		

Mil.	Thou.	Dol.
129		

Mil.	Thou.	Dol.
130		

Mil.	Thou.	Dol.
131		

Mil.	Thou.	Dol.
132		

Mil.	Thou.	Dol.
133		

Mil.	Thou.	Dol.
134		

Mil.	Thou.	Dol.
135		

Mil.	Thou.	Dol.
136		



**Item 7 — PRINCIPAL ACTIVITY OF THIS ESTABLISHMENT**

a. Does this establishment perform management, general administrative, or other supporting services PRIMARILY for establishments of your enterprise rather than for other business firms or for the general public? ("Enterprise" refers to the parent firm and all its establishments and subsidiaries under common ownership or control.)

150 ☐ YES — Mark (X) the box which best describes the major activity of this establishment →

2 ☐ NO — If "No" describe the primary activity of this establishment, then SKIP to Item 9.

158

- 161 ☐ Centralized administration  
 2 ☐ Research, development, and testing  
 3 ☐ Warehousing  
 4 ☐ Electronic data processing  
 5 ☐ Trucking  
 6 ☐ Communications  
 7 ☐ Repair services  
 8 ☐ Selling  
 9 ☐ Other — Specify ☒ 157

b. Is this establishment the corporate headquarters, executive office or head office for your entire enterprise?

152 ☐ YES — SKIP to Item 8

2 ☐ NO

c. Does this establishment perform these management and administrative functions or support services for ALL establishments of your enterprise?

153 ☐ YES — SKIP to Item 8

2 ☐ NO

d. Does this establishment perform these management and administrative functions or services for a SINGLE operating establishment which is located at the same physical location as shown in the address label?

154 ☐ YES

2 ☐ NO

**Item 8 — PRINCIPAL BUSINESS OR ACTIVITY OF THE OPERATING ESTABLISHMENTS SERVICED**

a. Mark (X) the ONE box which BEST describes the MAJOR kind of business or industrial activity of the operating establishments of your enterprise that are managed or serviced by the auxiliary referred to in the label.

- 155 ☐ Minerals extraction, production, or exploration  
 2 ☐ Construction (including general contracting, subcontracting, and land subdividing and developing)  
 3 ☐ Manufacturing (including publishing and printing)

- 5 ☐ Wholesale trade (including manufacturer's sales branches)  
 6 ☐ Retail trade  
 7 ☐ Service industries  
 9 ☐ Other — Specify ☒ 158

b. List in order of importance, the principal kinds of merchandise sold, products produced, types of services rendered, or construction activities performed by the operating establishments that are managed or serviced by the auxiliary listed in the address label. For each line, also indicate the percent of total sales or receipts that each line represents.

Source of sales or receipts

Percent of total sales or receipts

(1)		%
(2)		%
(3)		%
CENSUS USE ONLY 801		

**Item 9 — BILLINGS TO OTHER ESTABLISHMENTS OF YOUR ENTERPRISE IN 1987**

Report billings to all other establishments of your enterprise during 1987

**Include** • All merchandise billed by this establishment in 1987  
 • All billings, whether or not the merchandise was shipped directly by the supplier or shipped from this establishment

**Exclude** • Sales to establishments of other enterprises, and franchise sales  
 • Purchases made directly by your enterprise's individual establishments

Did this establishment have billings to other establishments of your enterprise during 1987?

710 ☐ YES — Report amount billed →  
 2 ☐ NO

Mil. Thou. Dol.

711

**Item 10 — SALES TO CUSTOMERS OUTSIDE YOUR ENTERPRISE IN 1987**

Report all sales made by this establishment during 1987 to customers outside your enterprise. EXCLUDE sales taxes and other taxes collected.

**Include** • Merchandise sales, receipts for services, and other business receipts  
 • Export transfers to foreign subsidiaries of your enterprise  
 • Cost of research and development for the Federal Government or for other enterprises on contract, as reported in Item 11  
 • Franchise sales

**Exclude** • Intra-enterprise transfers to other domestic establishments of your enterprise  
 • Sales to outside customers made by other establishments of your enterprise even though billed centrally by this establishment  
 • Sales and/or manufacturer's shipments already reported on other Census forms  
 • Nonoperating income

a. Did this establishment have sales of products or services to customers outside your enterprise during 1987?

010 ☐ YES — Report sales and receipts →  
 2 ☐ NO — SKIP to Item 11

011

b. Of the total sales reported in line a, report the approximate percent of receipts from —

Whole percents

(1) Products	012	%
(2) Services	013	%

**Item 11 — COST OF RESEARCH AND DEVELOPMENT IN 1987**

Report all costs incurred at this establishment during 1987 to support research and development activities (i.e., wages and salaries, direct materials costs, services and supporting costs, and an appropriate share of depreciation and overhead).

If this establishment performed research and development for the Federal Government or for other enterprises on contract during 1987, include the total amount charged for such work performed. Also, report such receipts in Item 10.

a. Did this establishment perform research and development during 1987?

720

1 ☐ YES — Go to b  
 2 ☐ NO — SKIP to Item 12

b. Source of funds for research and development performed

Mil. Thou. Dol.

(1) Federal Government contracts and subcontracts	721		
(2) Nonfederal sources outside your enterprise (other enterprises, local governments, etc.)	722		
(3) Other establishments of your enterprise	723		
(4) TOTAL cost of research and development — Sum of lines (1) through (3)	724		

**Item 12 — CAPITAL EXPENDITURES DURING 1987 (EXCLUDING LAND AND MINERAL RIGHTS)**

Capital expenditures refer to all costs that are capitalized to the fixed asset accounts and for which depreciation or amortization reserves are maintained. Include all items obtained through a capital lease.

**Include** • **Line b(1)(a)** — New vehicles purchased for highway use including passenger automobiles, trucks, commercial cars and buses, truck tractors and trailers, and special purpose vehicles  
 • **Line b(1)(c)** — Other new machinery and equipment including office machines and fixtures, furniture, warehouse lifts, and similar equipment. Report replacements as well as additions to capacity. Include vehicles whose primary use is off highway.  
 • **Line b(2)** — New construction, major alterations, capitalized repairs and improvement of buildings, other fixed structures, and site improvements (such as roads, parking lots, fences, utilities)  
 • Expenditures for structures which, on completion, are to be sold and leased back to you  
 • The cost of all improvements and new construction which were in progress, but had not been completed at the end of 1987  
 • Equipment that is an integral or permanent part of a building or structure  
 • **Line b(3)** — Total expenditures for old or existing plants and for second hand equipment acquired from others. Include machinery or equipment transferred from other plants of your enterprise at approximate market value.

**Exclude** • Cost of land and mineral rights  
 • Cost of maintenance and repairs charged as current operating expense  
 • Capital expenditures made by outside owners of property rented or leased to this establishment  
 • Capital expenditures made by this establishment for other locations of your enterprise

a. Did this establishment make capital expenditures during 1987?

400

1 ☐ YES — Go to b  
 2 ☐ NO — SKIP to Item 13

b. Type of capital expenditures

Mil. Thou. Dol.

(1) New machinery and equipment	401		
(a) New automobiles, trucks, trailers, special purpose vehicles, etc., for highway use			
(b) New computers and peripheral data processing equipment	402		
(c) All other expenditures for new machinery and equipment	403		
(d) TOTAL new machinery and equipment — Sum of lines (a) through (c)	404		
(2) New buildings, structures, and additions to plant	405		
(3) Used plant and used equipment acquired from others	406		
(4) TOTAL capital expenditures — Sum of lines (1)(d), (2), and (3)	410		



FORM ES-9200

**1987 ECONOMIC CENSUSES  
AUXILIARY ESTABLISHMENT REPORT**
U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS
 Please enter the 11-digit  
CENSUS FILE NUMBER  
as shown on this report  
(See label on page 1)

<b>Item 13 — DEPRECIABLE ASSETS (EXCLUDE LAND)</b> Report the gross cost of depreciable assets of this establishment for which depreciation or amortization is ordinarily maintained. Gross cost represents the acquisition cost to this establishment of such depreciable assets. The cost of assets should include all types of items for which capital expenditures are reported. (See instructions for Item 12.) <b>Include</b> • Cost of improvements and new construction that were in progress but not completed at the end of 1987 • Cost of depreciable assets owned by this establishment, but rented or leased to others under an operating lease agreement • Cost of depreciable assets obtained through capital leases <b>Exclude</b> • Cost of land and depletable assets (timber and mineral rights) • Current assets (inventories, cash, accounts receivable, etc.) and intangible assets (goodwill, patents, copyrights, etc.) • Cost of depreciable assets at other locations for which this establishment maintains records	<b>a.</b> Did this establishment have depreciable assets at the end of the specified year? 300 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO If "No" for both years, SKIP to Item 14 <b>b.</b> Gross cost of depreciable assets 301 Mil. Thou. Dol. (1) Buildings and structures 302 (2) Machinery and equipment 305 (3) TOTAL — Sum of lines (1) and (2)	End of 1986 350 End of 1987 351 1 <input type="checkbox"/> YES 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO 2 <input checked="" type="checkbox"/> NO If "No" for both years, SKIP to Item 14 Mil. Thou. Dol. Mil. Thou. Dol. 361 362 365
<b>Item 14 — DEPRECIATION CHARGES DURING 1987</b> Report additions made to accumulated depreciation and amortization accounts during 1987 for assets owned at the beginning of the year or acquired during the year.	Did this establishment have depreciation expense during 1987? 450 1 <input type="checkbox"/> YES — Report depreciation charged to income during 1987 2 <input checked="" type="checkbox"/> NO	Mil. Thou. Dol. 452
<b>Item 15 — RENTAL PAYMENTS IN 1987</b> <b>Include</b> • Payments for equivalent charges made to other enterprises for the use of buildings (including land and office space) structures, machinery, and equipment. (See Item 12 instructions for breakout of buildings and structures from machinery and equipment.) <b>Exclude</b> • Payments made by this establishment to the parent enterprise or any of its subsidiaries. The value of such enterprise owned assets should be reported as if actually owned by this establishment in Item 13. • Capital leases (should be reported as assets) • Rental payments made by this establishment for plant and equipment at other establishments of your enterprise	Did this establishment make rental payments during 1987? 550 1 <input type="checkbox"/> YES — Report rental payments 2 <input checked="" type="checkbox"/> NO	a. Buildings and structures 551 b. Machinery and equipment 552 c. TOTAL — Sum of lines a and b 555
<b>Item 16 — COST OF PURCHASED ELECTRICITY IN 1987</b> <b>Include</b> • The total amount actually paid or payable for electric energy purchased during the year from other enterprises, or received from other establishments of your enterprise. <b>Exclude</b> • The value of electricity generated and used at this establishment • Cost of purchased electricity which is included as part of normal rental payments	Did this establishment purchase electricity during 1987? 730 1 <input type="checkbox"/> YES — Report cost of purchased electricity 2 <input checked="" type="checkbox"/> NO Were these costs included in rental payments (Item 15)? 732 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO	731 741
<b>Item 17 — COST OF PURCHASED FUEL IN 1987</b> <b>Include</b> • The total amount actually paid or payable during the year for all fuels consumed for heat, power, or the generation of electricity • Coal, coke, natural and manufactured gas, fuel oil, liquefied petroleum gas, gasoline, etc. <b>Exclude</b> • Cost of purchased fuel which is included as part of normal rental payments • Gasoline and fuel purchased for highway vehicles	Did this establishment purchase fuels in 1987? 740 1 <input type="checkbox"/> YES — Report cost of purchased fuels 2 <input checked="" type="checkbox"/> NO Were these costs included in rental payments (Item 15)? 742 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO	741 751
<b>Item 18 — COST OF PURCHASED COMMUNICATION SERVICES IN 1987</b> <b>Include</b> • Payments for telephone, telegraph, data transmission, telex, teletype, ticker tape, phototransmission, and all other related services <b>Exclude</b> • Cost of purchased communication services which is included as part of rental payments	Did this establishment purchase communication services in 1987? 760 1 <input type="checkbox"/> YES — Report cost of purchased communication services 2 <input checked="" type="checkbox"/> NO Were these costs included in rental payments (Item 15)? 762 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO	761 771
<b>Item 19 — COST OF PURCHASED REPAIR SERVICES IN 1987</b> <b>Include</b> • The total amount paid to other establishments for purchased repair services (outside contractors, garages, etc.) • All noncapitalized repairs to buildings, structures, machinery, and equipment (such as repairs to motor vehicles, painting, roof repair, machinery and equipment repair, etc.) <b>NOTE:</b> Report the cost of purchased repair services for equipment that is an integral or permanent part of a building or structure as repairs for buildings and structures, not as equipment. <b>Exclude</b> • Repairs performed on leased buildings or equipment and paid for by normal lease payments • Capitalized improvements for which depreciation or amortization accounts are ordinarily maintained • The cost of all repairs (including all purchased materials) performed by the employees of this enterprise	<b>a.</b> Did this establishment purchase repair services for buildings and structures in 1987? 780 1 <input type="checkbox"/> YES — Report cost of purchased repair services for buildings and structures 2 <input checked="" type="checkbox"/> NO Were these costs included in rental payments (Item 15)? 782 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO <b>b.</b> Did this establishment purchase repair services for machinery and equipment in 1987? 770 1 <input type="checkbox"/> YES — Report cost of purchased repair services for machinery and equipment 2 <input checked="" type="checkbox"/> NO Were these costs included in rental payments (Item 15)? 772 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO	781 771 772
<b>Item 20 — INVENTORIES</b> The Census Inventory Inquiries are designed to collect information concerning all of the inventories owned by each enterprise and which are located within the United States. Inventories of multi-establishment enterprises should be reported by the establishment that is responsible for the inventories even if these inventories are held at a separate location. In this way, all inventories are accounted for on a nonduplicated basis. The sum of the inventories of all establishments of an enterprise should be approximately equal to the enterprise's total inventories after adjusting for valuation differences. For lines a through a report only those inventories that are attributable to this establishment's operations. Report such inventories as if this establishment owns them. Do not include inventories located at this establishment which are the responsibility of other establishments of your enterprise. <b>Include</b> • Finished products • Work in process • Materials, supplies, fuels, etc., which are for resale or for further fabrication • Inventories in transit for which this auxiliary has responsibility <b>Exclude</b> • Inventories owned by others but held by this auxiliary • Items not held for resale, such as fixtures, equipment, and supplies <b>NOTE:</b> Sum of lines d(1) and d(2) should equal total inventories on line b and sum of lines e(1) and e(2) should equal the amount of line d(2)	<b>a.</b> Did this establishment have inventories at the end of the year specified? 200 1 <input type="checkbox"/> YES 2 <input checked="" type="checkbox"/> NO If "No" for both years, SKIP to Item 21, Certification <b>b.</b> Report inventories at cost or market value using generally accepted accounting methods. (For inventories at LIFO cost, use the sum of the LIFO amount plus the LIFO reserve when completing lines b through d — Should equal sum of lines d(1) and d(2)) 210 Mil. Thou. Dol. Mil. Thou. Dol. 260 <b>c.</b> Did this establishment have inventories subject to LIFO costing at the end of the specified year? 220 1 <input type="checkbox"/> YES — Complete items d and e 2 <input checked="" type="checkbox"/> NO If "No" for both years, SKIP to Item 21, Certification Mil. Thou. Dol. Mil. Thou. Dol. 240 290 <b>d. (1)</b> Total inventories reported on line b which is not subject to LIFO costing. 230 <b>(2)</b> Total inventories reported on line b which is subject to LIFO costing (gross) — Should equal sum of lines e(1) and e(2) 280 <b>e. (1)</b> LIFO reserve associated with the inventories reported on line d(2) 232 282 <b>(2)</b> LIFO value of inventories reported on line d(2) (net) 231 281	260 270 280 281

**REMARKS** — Please use this space for any explanations that may be essential in understanding your reported data.

**Item 21 — CERTIFICATION** — This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report — Print or type			Period covered by this report	FROM: Mo. Year	TO: Mo. Year
Area code	Number	Extension	Signature of authorized person	Date	
Telephone					



U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

FORM

MC-1403

## 1987 CENSUS OF MINERAL INDUSTRIES

CHEMICAL AND FERTILIZER MINERALS AND  
MISCELLANEOUS NONMETALLIC MINERALS

OMB APPROVAL NO. 0507-0564; EXPIRES 06/88

**NOTICE** — Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report,  
please refer to this Census File Number (CFN)

Employer Identification (EI)  
Number

MC-1403

Please complete this  
form and RETURN TO

BUREAU OF THE CENSUS  
1201 East Tenth Street  
Jeffersonville, IN 47134

**DUE DATE: FEBRUARY 15, 1988**

If you cannot file by the due date, a time extension request should be sent to the above address; please include your 11-digit Census File Number (CFN).

**Note** — Please read the accompanying instructions before answering the questions.

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

**Item 1A — EMPLOYER IDENTIFICATION NUMBER**

Is the Employer Identification (EI) Number shown in the label the SAME as that used for this establishment on its latest 1987 Employer's Quarterly Federal Tax Return, Treasury Form 941?

054

1 ☐ YES2 ☐ NO

— Enter current

(9 digits)

**Item 1B — PHYSICAL LOCATION OF ESTABLISHMENT** — Answer parts a through d.

**NOTE:** P.O. boxes or rural routes are not physical locations.

a. ☐ Same as shown in mailing label. If different, indicate actual physical location.

NUMBER AND STREET

CITY, TOWN, VILLAGE, ETC.

STATE

ZIP CODE

b. Is this establishment physically located inside the legal boundaries of the city, town, village, etc.?

055

1 ☐ YES2 ☐ NO3 ☐ No legal boundaries4 ☐ Don't know

c. Type of municipality where physically located

056

1 ☐ City, village, or borough2 ☐ Town or township3 ☐ Other or don't know

d. Name of county where physically located

**Item 1C — ORGANIZATIONAL STATUS** — Mark (X) the ONE box which best describes this establishment during 1987.

003

1 ☐ Individual proprietorship3 ☐ Cooperative association (taxable)5 ☐ Government — Specify6 ☐ Corporation (do not mark if any form of cooperative association)9 ☐ Other — Specify2 ☐ Partnership4 ☐ Cooperative association (tax-exempt)**Item 1D — PRINCIPAL ACTIVITY** — Mark (X) the ONE box which best describes the PRINCIPAL kind of business or industrial activity of this establishment.

070

1 ☐ Minerals extraction, quarrying, production, exploration, mining contract services, or oil and gas field operations and services4 ☐ Wholesale operations2 ☐ Manufacturing (fabricating, assembling, or processing materials into new products. Also include such activities as: logging, apparel jobbing, publishing, printing, and machine shops)5 ☐ Retail Stores6 ☐ Other3 ☐ Construction (including general contracting, subcontracting, home building, and land subdividing and development)

If you have marked (X) in boxes 2 through 6 above, describe your principal activity below.

**HOW TO REPORT****COMPLETE EACH ITEM, ENTER "0" WHEN APPROPRIATE**

Figures for dollars and hours worked should be rounded to thousands. If you wish, you may report to the nearest unit. Be careful to enter your figures in the correct columns.

Example: If a figure is \$1,125,628, report either

• **PREFERRED method . . .**

Acceptable method . . .

Mil- lions (000)	Thou- sands (00)	Dol- lars (000)
1	125	628

• Complete each item, enter "0" when appropriate

Key

Number

**Item 2 — EMPLOYMENT IN 1987**

(1) Merch

301

(2) May

302

(3) August

303

(4) November

304

b. **TOTAL**  
Sum of lines (1) through (4) —>

305

c. Average number (Divide line b by 4; omit fractions.)

306

d. All other employees at this establishment (pay period including March 12th)

307

e. **TOTAL EMPLOYMENT**  
Sum of lines c and d —>

308

**Item 3A — ANNUAL PAYROLL FOR 1987, BEFORE DEDUCTIONS**

(Exclude fringe benefits reported in 3B.)

a. Production, development, and exploration workers' wages (for employees reported in item 2c)

309

b. All other salaries and wages (for employees reported in item 2d)

310

c. **TOTAL PAYROLL**  
Sum of lines a and b —>

311

**Item 3B — EMPLOYER'S COST FOR FRINGE BENEFITS**

Supplemental labor costs (Exclude from items 3A and 3C.)

a. Legally required expenditures (Include Social Security contributions.)

312

b. Payments for voluntary programs

313

c. **TOTAL COST**  
Sum of lines a and b —>

314

**Item 3C — FIRST QUARTER PAYROLL FOR 1987, BEFORE DEDUCTIONS**

TOTAL PAYROLL FOR THE FIRST QUARTER (JANUARY-MARCH)

315

• Complete each item, enter "0" when appropriate

Key

Mil.

Thou.

Hrs.

**Item 4 — HOURS WORKED BY PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKERS BY QUARTER**

a. January through March

316

b. April through June

317

c. July through September

318

d. October through December

319

e. **TOTAL HOURS WORKED** — Sum of lines a through d —>

320

**Item 5 — COST OF SUPPLIES, ETC.**

Delivered cost including freight and other direct charges

Key

Mark (X) if "0"

a. Cost of supplies used, minerals received for preparation, and purchased machinery installed (See item 17B.)

321

b. Cost of products bought and resold without further processing

222

0

322

c. Cost of purchased fuels consumed (See item 17C.)

223

0

323

d. Cost of purchased electricity

224

0

324

e. Cost of contract work done for you by others

225

0

325

f. **TOTAL COST** — Sum of lines a through e —>

326

**Item 6 — QUANTITY OF ELECTRICITY**

a. Purchased electricity (cost is reported in item 5d)

327

b. Generated electricity (gross less generating station use)

328

c. Electricity sold or transferred to other establishments

329

**Item 7 — INVENTORIES OF THIS ESTABLISHMENT AT THE END OF YEAR (Report both years.)**

Are any of the inventories of this establishment subject to the LIFO method of valuation?

230

1 ☐ YES — Use the sum of the LIFO amount plus the LIFO reserve for completing lines a through d(2). Note — The sum of lines d(1), e(1), and f(2) should equal line c.Did you change to LIFO for calendar year 1987? 272 1 ☐ Yes 2 ☐ No2 ☐ NO — Complete only lines a through d(1). Note — Line d(1) should equal line c.

Report inventories at cost or market using generally accepted accounting methods.

Note — Sum of lines a and b equals c.

a. Mined or quarried products

Key

END OF 1987

Mil.

Thou.

Dol.

Key

END OF 1988

Mil.

Thou.

Dol.

b. Supplies, parts, fuels, etc.

332

333

334

335

336

337

338

339

340

341

Report the following breakdown of line c:

d. (1) Amount not subject to LIFO costing

342

343

344

345

346

347

348

349

350

351

(2) Amount subject to LIFO costing (gross)

352

353

354

355

356

357

358

359

360

361

Report the following applicable to line d(2):

e. (1) Amount of the LIFO reserve

362

363

364

365

366

367

368

369

370

371

(2) LIFO value of line d(2) (net)

372

373

374

375

376

377

378

379

380

381

CENSUS  
USE  
PENALTY FOR FAILURE TO REPORT

CONTINUE ON PAGE 2

Item 8 — ASSETS, CAPITAL EXPENDITURES, AND RETIREMENTS		Key	Mark (X) if "0"	TOTAL — Sum of columns (2) through (5)				Buildings and other structures (Exclude land in items 8 and 9.)				Machinery and equipment				Mineral exploration and development				Mineral land and rights																																																			
				(1)				(2)				(3)				(4)				(5)																																																			
				Key	Mil.	Thou.	Dol.	Key	Mil.	Thou.	Dol.	Key	Mil.	Thou.	Dol.	Key	Mil.	Thou.	Dol.	Key	Mil.	Thou.	Dol.																																																
a. Gross value of depreciable and/or depletable assets (acquisition cost) at the beginning of the year					341				339				340				270				271																																																		
b. TOTAL capital expenditures during the year				250	<input type="checkbox"/> 0	350			378				379				273				274																																																		
(1) Capital expenditures for new buildings and machinery									342				343																																																										
(2) Capital expenditures for used buildings and machinery									345				346																																																										
c. Retirements and disposition of depreciable and/or depletable assets (i.e., gross value of assets sold, retired, destroyed, abandoned, scrapped, etc.)				253	<input type="checkbox"/> 0	353	(		361	(			352	(			278	(			277	(																																																	
d. Gross value of depreciable and/or depletable assets at the end of the year (lines 8a plus 8b minus 8c equals 8d)						356			354				355				279				280																																																		
Item 9 — DEPRECIATION AND/OR DEPLETION CHARGES FOR THE YEAR 1987																																																																							
				258	<input type="checkbox"/> 0	359			357				358				282				283																																																		
Item 10 — RENTAL PAYMENTS DURING YEAR FOR BUILDINGS AND MACHINERY																																																																							
				262	<input type="checkbox"/> 0	382			360				381																																																										
Item 11 — CURRENT ACCOUNT EXPENDITURES DURING THE YEAR FOR MINERAL PROPERTIES																																																																							
				197	<input type="checkbox"/> 0	297										285				286																																																			
Item 12 — COST OF PURCHASED COMMUNICATION SERVICES (TELEPHONE, TELEGRAPH, ETC.)																																																																							
Item 13 — LEASE RENTS FOR MINERAL PROPERTIES																																																																							
Item 14 — OPERATIONAL STATUS																																																																							
a. Mark (X) the ONE box which best describes this establishment at the end of 1987.																																																																							
<input type="checkbox"/> 001				<input type="checkbox"/> In operation (including operations under development, exploration, or construction) <input type="checkbox"/> Temporarily or seasonally inactive <input type="checkbox"/> Ceased operation <input type="checkbox"/> Sold or leased TO another company — Give date at right AND enter name, etc., below <input type="checkbox"/> Acquired or leased FROM another company — Give date at right AND enter name, etc., below																																																																			
				GIVE DATE Enter figures only																																																																			
				NAME OF NEW/FORMER OWNER OR OPERATOR																																																																			
				El Number (9 digits)																																																																			
				NUMBER AND STREET																																																																			
				CITY																																																																			
				STATE																																																																			
				ZIP CODE																																																																			
b. Is the FIRST DIGIT of your Census File Number (imprinted in the address box) a zero "0"? <input type="checkbox"/> YES — Complete items 15e through d <input type="checkbox"/> NO — SKIP to item 16																																																																							
Item 15 — OWNERSHIP AND CONTROL																																																																							
Enter the company name and address (Number and street, city, State, ZIP Code) and El Number. If more space is needed to list companies, use remarks section.																																																																							
a. Is this company owned or controlled by another company? <input type="checkbox"/> 097				<input type="checkbox"/> YES <input type="checkbox"/> NO																																																																			
				NAME AND ADDRESS OF OWNING OR CONTROLLING COMPANY																																																																			
				El Number (9 digits)																																																																			
b. Does this company own or control any other company or companies? <input type="checkbox"/> 098				<input type="checkbox"/> YES <input type="checkbox"/> NO																																																																			
				NAME AND ADDRESS OF OWNED OR CONTROLLED COMPANY																																																																			
				El Number (9 digits)																																																																			
c. Did this company have any mineral establishment under exploration or development but not in production at the end of the year? <input type="checkbox"/> 113 <input type="checkbox"/> YES <input type="checkbox"/> NO																																																																							
d. Did this company operate at more than one location during 1987? <input type="checkbox"/> 079 <input type="checkbox"/> YES — List additional locations below <input type="checkbox"/> NO — SKIP to item 16																																																																							
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Physical address of business location (Number and street, city, State, ZIP Code)</th> <th rowspan="2">Employer Identification Number</th> <th rowspan="2">Kind of business at this location</th> <th colspan="3">Sales and receipts</th> <th colspan="3">Annual payroll</th> <th rowspan="2">Number of employees during pay period including March 12</th> <th rowspan="2">Are these figures included on the front of this report?</th> </tr> <tr> <th>(4)</th> <th>(5)</th> <th>(6)</th> <th>(7)</th> </tr> <tr> <th>(1)</th> <th>(2)</th> <th>(3)</th> <th>Mil.</th> <th>Thou.</th> <th>Dol.</th> <th>Mil.</th> <th>Thou.</th> <th>Dol.</th> <th>(6)</th> <th>(7)</th> </tr> </thead> <tbody> <tr> <td></td> <td>(9 digits)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> <tr> <td></td> <td>(9 digits)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> </tbody> </table>																								Physical address of business location (Number and street, city, State, ZIP Code)	Employer Identification Number	Kind of business at this location	Sales and receipts			Annual payroll			Number of employees during pay period including March 12	Are these figures included on the front of this report?	(4)	(5)	(6)	(7)	(1)	(2)	(3)	Mil.	Thou.	Dol.	Mil.	Thou.	Dol.	(6)	(7)		(9 digits)									<input type="checkbox"/> YES <input type="checkbox"/> NO		(9 digits)									<input type="checkbox"/> YES <input type="checkbox"/> NO
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			(4)	(5)	(6)	(7)																																																																	
(1)	(2)	(3)	Mil.	Thou.	Dol.	Mil.	Thou.	Dol.	(6)	(7)																																																													
	(9 digits)									<input type="checkbox"/> YES <input type="checkbox"/> NO																																																													
	(9 digits)									<input type="checkbox"/> YES <input type="checkbox"/> NO																																																													
Item 16 — CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT																																																																							
The Bureau of the Census reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks before returning your report.																																																																							
• Review the report carefully to see that no items are omitted for the year being covered. • Calculate and enter figures for the four "reasonableness" checks below, and review the results. • Correct your report for any errors you find and explain unusual figures in remarks.																																																																							
For most establishments, the figures computed usually fall within the ranges indicated.																																																																							
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d. Supplies cost per dollar of shipments	Item 5f (Total supplies cost) ÷ item 18B (Total value of shipments)	¢	05¢ — 95¢																																																																				
a. Is the total of value of shipments (item 18B) plus total of capital expenditures, except land (item 8b, columns (2), (3), and (4), greater than the sum of payroll (item 3Ac) plus total cost of supplies, etc., (item 5f)? <input type="checkbox"/> YES <input type="checkbox"/> NO — Explain in remarks																																																																							

CONTINUE ON PAGE 3 →



FORM MC-1403

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUSPLEASE ENTER THIS ESTABLISHMENT'S  
11-DIGIT CENSUS FILE NUMBER**1987 CENSUS OF MINERAL INDUSTRIES**  
**CHEMICAL AND FERTILIZER MINERALS AND**  
**MISCELLANEOUS NONMETALLIC MINERALS — Continued**

Name of establishment (Same as address box)

**Item 17A — WATER USE DURING 1987**

Mark (X) one box only

**1. What was the total quantity of new water intake for this establishment for the calendar year 1987?** Include water from all sources (public water systems, rivers, lakes, streams, wells, oceans, and other) which was used in mining, mineral treatment, and auxiliary operations, such as cooling, boiler feed, and sanitary services.

- 1
- ☐
- Less than 1 million gallons
- 
- 2
- ☐
- 1 to 9 million gallons
- 
- 3
- ☐
- 10 to 19 million gallons

- 4
- ☐
- 20 to 49 million gallons
- 
- 5
- ☐
- 50 to 99 million gallons
- 
- 6
- ☐
- 100 million gallons or more

348

**2. Did you recirculate any water during the calendar year 1987?** Recirculation is defined as the return of water from a process, operation, or storage area to the incoming flow to reduce the intake of new water.

- 1
- ☐
- YES
- 
- 2
- ☐
- NO

349

**Item 17B — SUPPLIES USED, MINERALS FOR PREPARATION, AND PURCHASED MACHINERY INSTALLED DURING 1987****Part I — ITEMS PURCHASED OR RECEIVED FROM OTHER ESTABLISHMENTS AND USED****Instructions — Please read**

Report delivered cost of the individual items listed below, purchased or received from other establishments, which were used or prepared during 1987. (For valuation, see instructions for item 5 in the instruction sheets.)

Include cost of items listed below whether charged to current or capital accounts. Exclude associated labor costs reported in item 3A, 3B, or 5e.

Report quantities in the unit of measure specified in column (B-2).

Report quantity and estimated cost of minerals received for preparation on a custom or toll basis as if purchased.

Include the cost of items for which less than \$25,000 worth was used in "All other supplies," line 6.

If the information as requested cannot be taken directly from your book records, reasonable estimates are acceptable.

Line No.	Minerals received and processed, machinery installed, and supplies used (A)	Census material code (B-1)	Unit of measure for quantities (B-2)	Received from other establishments of this company, purchased from others, and minerals received for preparation on a custom or toll basis				
				Quantity (C)	Cost, including delivery cost (freight-in) (D)			
					573	574 Millions	Thou- sands	Dollars
1	<b>MINERALS RECEIVED FOR PREPARATION (Estimate value of crude minerals received for custom or toll preparation.)</b> Crude minerals for preparation	147091 3	Short tons (dry basis)		\$			
2	<b>PURCHASED MACHINERY INSTALLED</b> , including equipment installed at the operation as well as mobile loading and transportation equipment	353020 1						
3	<b>PARTS AND ATTACHMENTS</b> for construction, mining, and conveying equipment; and for mineral preparation machinery and equipment	353030 0						
4	<b>SUPPLIES USED</b> Explosive materials (including ammonium nitrate) and blasting accessories	289210 7						
5	Steel mill shapes and forms (such as plates, sheets, strip, piling, roof bolts, drill steel bars, other bars, rails, wheels, track accessories, pipe, tubing, wire, wire products, and structural shapes)	331201 4						
6	All other supplies (such as timber and lumber purchased, forgings, castings, drill bits, other tools, reagents and other chemicals, lubricants, and water purchased) — List the three principal types of supplies included here.	970099 8						
7	<b>TOTAL</b> Sum of lines 1—6 should be the same as item 5a				\$			

**Part II — QUANTITY OF MINERALS MINED AND PREPARED AT THIS ESTABLISHMENT****Instructions — Please read**

Report below the quantity of crude minerals mined and also prepared at this establishment. Purchases or receipts of this item should be reported only in part I.

Minerals mined for sale as such and not for preparation at this establishment should only be reported in item 18B. If crude ore is recorded in cubic yards, estimate short tons from the volume mined.

Item (A)	Census material code (B-1)	Unit of measure for quantities (B-2)	Quantity mined and also prepared at this establishment (C)
Crude minerals for preparation (Report tonnage as it is mined from the earth.)	147091 3	Short tons (dry basis)	

**Item 17C — FUELS USED DURING 1987**

Line No.	Kind of fuel (Report total delivered cost, not cost per unit. Fuels received from other establishments of your company should be included at estimated market value.) (A)	Census code (B-1)	Unit of measure for quantities (B-2)	1987 CONSUMPTION			
				Quantity (C)	Cost, including delivery cost (freight-in) (D)		
					563	564 Millions	Thou- sands
1	Coal — bituminous, subbituminous, lignite, and anthracite	121005 3	Short tons		\$		
2	<b>FUEL OIL</b> Distillate (light) grade numbers 1, 2, 4, and light diesel fuel	291141 0	Barrels (42 gal.)				
3	Residue (heavy) grade numbers 5 and 6 and heavy diesel fuel	291151 9					
4	Gas — natural, manufactured, and mixed	131159 6	Million cu. ft.				
5	Gasoline	291111 3	Thousand gallons				
6	Other fuels — liquefied petroleum gas, coke, wood, and other	960018 0					
7	<b>TOTAL</b> Sum of lines 1—6 should be the same as item 5c				\$		

CONTINUE WITH ITEM 18A ON PAGE 4

## Item 18A — TYPE OF OPERATION DURING 1987 (Include production, development, and exploration operations.)

Line No.	Item	Key	Mark (X) appropriate boxes
1	<b>MINING METHODS</b> <i>Mark (X) one or more</i> Open-pit	401	6205 <input type="checkbox"/>
2	Underground	402	6304 <input type="checkbox"/>
3	Other (such as well, brine, or dredge)	403	6395 <input type="checkbox"/>
4	No mine or abandoned mine	404	6106 <input type="checkbox"/>
5	Preparation plant (such as crushing, grinding, washing, evaporation, drying, calcining, etc.)	405	6999 <input type="checkbox"/>
6	No preparation plant	406	6601 <input type="checkbox"/>

## Item 18B — PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1987

## Instructions — Please read

**Do not combine product lines** — Report separately and include all products produced or physically shipped from the establishment during 1987. Include material withdrawn from stockpiles; products shipped on consignment; and prepared minerals from crude material mined at this establishment, purchased, received from other establishments of your company, or received for preparation on a custom or toll basis. Report the estimated value of products prepared on a custom basis and of products transferred for preparation or other use to other establishments of your company. (See Instruction sheets, part D, for the procedure of approximating interplant transfer values.)

**Do not include** as crude shipments any crude materials mined and also prepared at this establishment. These materials should be reported on the appropriate line for the prepared product. Include in the value of shipments, royalties and also bonuses or other credits for minerals contained. Penalties for impurities, such as arsenic, should be excluded from the value of shipments. Report the net total values F.O.B. mine or plant after discounts and allowances and exclusive of freight charges and excise taxes.

**Include** in crude production, any crude materials mined and prepared at this establishment. Report shipments of the product recovered after preparation. If products are shipped in bags or other packages, report the packaged value.

Report quantities in the unit of measure specified in column (B-2). Short tons are equal to 2,000 pounds. Long tons equal 2,240 pounds.

## PHOSPHATE ROCK PRODUCTION

**Line 12** — Report the total amount of all crude phosphate rock mined at this establishment. If crude ore or matrix is recorded in cubic yards, estimate short tons from the volume mined. The quantity mined for preparation at this establishment should also be reported in item 17B, part II.

**Line 13** — Report the quantity of all washed and concentrated phosphate rock produced at this establishment, including all beneficiated products such as pebble, wet rock concentrates, and classified concentrates that will eventually be dried, nodulized, sintered, or calcined at either this location or elsewhere.

**Lines 14 and 15** — Report the quantity of all dried, calcined, sintered, or nodulized phosphate rock produced at this establishment.

## PHOSPHATE ROCK SHIPMENTS

**Lines 15 and 18** — Report the quantity and value of shipments of any crude ore shipped to a washer and concentrator that is not included as part of this establishment on line 16. If any marketable crude ore is shipped from this establishment, report quantity and value on line 18. If crude ore or matrix is recorded in cubic yards, estimate short tons from the volume mined.

**Lines 17 and 19** — Report the quantity and value of any washed and concentrated phosphate rock shipped to a preparation plant that is not included as a part of this establishment on line 17. If any marketable washed and concentrated phosphate rock is shipped from this establishment, report quantity and value on line 19.

**Lines 20 and 21** — Report the quantity and value of shipments of any dried, calcined, sintered, or nodulized phosphate rock on lines 20 and 21.

The Bureau of Mines, U.S. Department of the Interior, generally collects detailed figures on the mineral products listed here. This item provides only summary figures which will serve to relate the statistics compiled from the Census of Mineral Industries to the statistics compiled from the Bureau of Mines surveys.

Line No.	Description		Census product code	Unit of measure for quantities	Quantity of production	Shipments and interplant transfers		
						Quantity	Value, f.o.b. mine or plant	
	(A)	(B-1)	(B-2)	(C)	(D)	(E)	Millions	Dollars
1	<b>BARITE</b>							
	Crude	14721 00 6					\$	
2	Prepared (crushed or ground, including flotation concentrates)	14722 00 3						
3	<b>FLUORSPAR</b>							
	Crude	14731 00 4						
4	Prepared (crushed or ground, including flotation concentrates)	14732 00 2						
5	Zinc concentrates	10312 21 3						
6	<b>POTASSIUM SALTS</b>							
	Crude salts mined (ore)	14741 00 3	Short tons					
7	Processed or refined	14742 00 1						
8	Sodium carbonates (natural)	14743 01 7						
9	Sodium sulfates (natural)	14743 03 3						
10	<b>BORON COMPOUNDS</b>							
	Sodium borates (natural)	14744 01 5						
11	Other boron compounds (natural)	14744 03 1						
12	<b>PHOSPHATE ROCK PRODUCTION</b>							
	Crude (ore or matrix)	14751 01 0						
13	Washed and concentrated	14752 01 8						
14	Dried	14752 08 7						
15	Calcined, sintered, or nodulized	14752 08 3						
16	<b>PHOSPHATE ROCK SHIPPED TO PREPARATION PLANTS NOT INCLUDED IN THIS REPORT</b>							
	Crude (ore or matrix) (Report production on line 12.)	14751 03 6	Short tons (dry basis)					
17	Washed and concentrated (Report production on line 13.)	14752 03 4						
18	<b>MARKETABLE PHOSPHATE ROCK SHIPMENTS</b>							
	Crude (ore or matrix) (Report production on line 12.)	14751 05 1						
19	Washed and concentrated (Report production on line 13.)	14752 05 9						
20	Dried (Report production on line 14.)	14752 06 7						
21	Calcined, sintered, or nodulized (Report production on line 15.)	14752 08 3						

CONTINUE ON PAGE 5 →



FORM <b>MC-1403</b>	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	PLEASE ENTER THIS ESTABLISHMENT'S <b>11-DIGIT CENSUS FILE NUMBER</b>
<b>1987 CENSUS OF MINERAL INDUSTRIES</b> <b>CHEMICAL AND FERTILIZER MINERALS AND</b> <b>MISCELLANEOUS NONMETALLIC MINERALS — Continued</b>		Name of establishment (Same as address box)

**Item 18B — PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1987 — Continued**

Line No.	Description  (A)	Census product code  581 (B-1)	Unit of measure for quantities  (B-2)	Quantity of production  582 (C)	Shipments and interplant transfers			
					Quantity  583 (D)	Value, f.o.b. mine or plant (E)		
						584 Millions	Thou- sands	Dollars
22	Rock salt	14760 00 3	Short tons			\$		
23	Native sulfur (Frasch sulfur or sulfur ore)	14770 00 2	Long tons					
24	Chemical and fertilizer minerals, n.e.c., such as pyrites, spodumene, mineral pigments, etc. (ore, fines, and concentrates)	14790 00 0						
25	Asbestos	14999 01 5						
26	Diatomite (diatomaceous earth)	14996 00 3						
27	<b>GYPSUM</b> Crude (run of mine)	14991 00 4						
28	Crushed, ground, screened, or dried	14922 00 9						
29	Mica	14991 00 4						
30	Native asphalt and bitumens (bituminous limestone, bituminous sandstone, and gilsonite)	14992 00 2						
31	Natural abrasives, except sand (garnet, diamond, tripoli, emery, etc.)	14994 00 8	Short tons					
32	Peat	14995 00 5						
33	Perlite	14999 05 8						
34	Pumice and pumicite, including volcanic ash and scoria	14993 00 0						
35	Shell, crushed or broken	14999 07 2						
36	<b>TALC, SOAPSTONE, AND PYROPHYLLITE</b> Crude	14961 00 7						
37	Crushed, ground, or sewed; Including flotation concentrates	14962 00 5						
38	Other nonmetallic minerals, n.e.c., such as vermiculite, graphite, gemstones, staurolite, greensand, etc. — <i>Specify kind</i>	14999 98 1						
39	<b>ALL OTHER PRODUCTS OF THIS ESTABLISHMENT</b> <i>Describe and report separately the quantity and value of each product with a value of \$50,000 or more which cannot be assigned to one of the lines above. Specify unit of measure for quantity. For all remaining products, write "Other" and report a single total value.</i>	18						
40		28						
41		34						
42		Receipts for work or services performed for other establishments, such as hauling, stripping, shaft sinking, pumping, and shop work (Exclude receipts for preparation of minerals on a custom or toll basis.)	14810 90 7					
43	<b>RESALES</b> Sales of products bought and sold without further processing. The cost of such products should be reported in item 5b.	99989 00 6						
44	<b>TOTAL value of shipments and receipts</b> <i>Sum of lines 1—43, column (E)</i>	77000 00 8				\$		

**Items 19—21 — Not applicable to this report.**

REMARKS — Please use this space for any explanations that may be essential in understanding your reported data.

**Item 22 — CERTIFICATION** — This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report — <i>Print or type</i>	Telephone			Period covered by this report	FROM: Mo. Year	TO: Mo. Year
	Area code	Number	Extension			
Address — <i>Number and street</i>				Signature of authorized person		
City	State	ZIP Code		Title	Date	

# 1987 CENSUS OF MINERAL INDUSTRIES

## INSTRUCTIONS FOR REPORTING NONMETALLIC MINERALS (EXCEPT FUELS) MINING

### FORMS MC-1401, MC-1402, AND MC-1403

In all correspondence with the Bureau of the Census, please include the 11-digit Census File Number which appears in the address box of the report form. Address all correspondence to

Bureau of the Census  
1201 East Tenth Street  
Jeffersonville, IN 47134

- As you complete the report for each establishment, please enter the 11-digit Census File Number at the top of the odd-numbered pages as requested.
- Please read these instructions and those appearing on the report form for each item before entering your figures.

#### A. WHO SHOULD REPORT?

The Census of Mineral Industries reports are required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Every concern is required to submit a separate Census report for each of its mineral establishments in the United States, including mines under development and preparation plants under construction. Enterprises with more than one establishment must submit a separate report for each establishment operated during all or any part of 1987. Reports should be returned to the Jeffersonville, Indiana, office as shown on the enclosed envelope.

Each report should be submitted by the operator of the establishment, whether he/she is the owner or is operating it under lease or contract.

Based on Bureau of the Census records, a report form is provided for each establishment which your company operated in 1987. If you have not received sufficient forms to cover all the mineral establishments operated by your company, write to the above address for needed forms. Be sure to describe the type of activity carried on at the establishments for which you request additional forms.

##### 1. What is a mineral establishment?

For purposes of the Census, a **mineral establishment** is defined as a single physical location where mineral operations are conducted; for example, a mine only (a mine may be an underground operation, a quarry or pit, a well or group of wells, or a river, lake, or ocean deposit), a mine and preparation plant (such plants may be engaged in milling, washing, calcining, crushing, classifying, or other types of mineral preparation), or a preparation plant only. Since the information reported will be summarized to totals for each industry, State, and county, separate reports are required for different physical locations even though the establishments may be engaged in the same type of mining or preparation.

Thus, a mineral establishment represents a working or group of workings at a given locality in which operations are conducted as a unit or are unified by common management or joint handling of some part of the mining or preparation process. Individual shafts, openings, or sites should not necessarily be considered as individual mines; open-pit mines, however, should be reported separately from underground mines wherever possible. Plants engaged solely in preparing minerals mined at other locations should be reported separately.

Separate reports are required for lease and land acquisitions of mineral rights if they are located in a county different than any establishment operated. (These reports should include a designation of the kind of mineral expected to be produced.) Such acquisitions may be included with the report for the nearest operating establishment producing the same kind of mineral if the establishment is located in the same county as the acquisition.

For portable sand and gravel preparation and portable stone-crushing plants, only one report is required for all operations of a plant during the year. Specify in the report the principal locations at which the plant was operated in 1987.

In completing your reports, carefully prepared estimates are acceptable if the data requested are not available from book records.

##### 2. How to report for establishments with no production during 1987.

If any of your company's mineral establishments had no production at all during 1987 you should, nevertheless, return the report for each such establishment with all other information completed and with "0" entered in item 18B. If a mining location was not in production, but had custodial employees, maintained inventories, or made shipments during the year, the information should be reported in the appropriate section of the report form. The Census includes sites under exploration, mines under development or maintenance only, and plants under construction.

##### 3. How to report if this questionnaire does not pertain to your operations.

If this questionnaire does not pertain to your type of activity, please complete all appropriate items, such as employment, payroll, shipments, etc., of this report, and use the "Remarks" section to describe your type of activities.

#### B. WHAT ACTIVITIES SHOULD BE REPORTED?

Each report should cover (1) the operations of a mine, pit, or quarry, together with its associated shops, auxiliary units, yards, mill or preparation plant, and offices; or (2) a mill or preparation plant not at the site of the mines served or operated under separate management from the mines, together with its associated shops, auxiliary units, and offices. The report should also include such activities as generating electricity for the mine or

plant (a central power plant serving two or more mineral establishments should be included in the report for that establishment to which the power plant furnishes the greatest quantity of electric energy); maintenance of mine, plant, and equipment; and receiving, shipping, storage, research, recordkeeping, health, safety, cafeteria, and other services, when carried on at the same physical location by the mineral establishment. The report should exclude the operation of company stores, boarding houses, bunk houses, and recreational facilities. The report should also exclude sales branches, research laboratories, and general administrative offices, if they were operated as separate establishments. Such operations should be reported, where applicable, on separate Census of Business, Census of Manufactures, or central office or auxiliary forms.

The report should not include plants primarily producing cement, lime, structural clay or pottery products, or synthetic abrasives. Such operations could be reported on Census of Manufactures forms. The report should also exclude construction activities but should include separate stone, sand, and gravel quarrying and crushing operations carried on by a company whose primary activity is construction.

#### C. WHAT PERIOD SHOULD EACH REPORT COVER?

Each report should cover the calendar year 1987. However, a report is required even if the establishment was operated only part of the year. If your book records are not on a calendar year basis, carefully prepared estimates will be acceptable. If reporting on a calendar year basis will involve considerable additional costs, and your fiscal year covers at least 10 months of calendar year 1987 (i.e., ends between October 31, 1987 and February 29, 1988), you may report on a fiscal basis. However, all employment, payroll, and hours worked figures should relate to the calendar year rather than the fiscal year. (These calendar year payroll records should be available from your tax records.)

In the certification, the dates should show the period which the report covers. Thus, if an establishment began to operate or ceased to operate within the year 1987, the dates should span only that part of the year during which the mine or plant was operated. If the operator changed during the year, complete the report only for the part of 1987 in which your company operated the establishment. Report in item 14 the appropriate information on changes in operator or operations.

#### D. HOW SHOULD MULTIPLE ESTABLISHMENT COMPANIES DETERMINE TRANSFER VALUES OF PRODUCTS AND MATERIALS FROM ONE ESTABLISHMENT TO ANOTHER ("INTERPLANT TRANSFERS")?

One of the important statistical measures of mining activity is "value added by mining," which is derived by the Census Bureau from the figures reported for value of shipments, capital expenditures, cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery installed during the year.

In order for statistics on value added and other subjects to be comparable from industry to industry or area to area, it is necessary that the operations of each establishment of a multiple establishment organization be reported as though the establishment were a separate "economic" unit. This means that the value of interplant transfers within a company should include, in addition to direct costs of production, a reasonable proportion of "all other costs (company overhead) and profits." The establishments receiving such transfers should report them as purchased minerals for preparation, supplies, fuels, or electric energy at the same value plus costs of freight and other direct handling charges. (See item 5.)

#### SPECIFIC ITEMS

► **Item 1A — EMPLOYER IDENTIFICATION NUMBER** — Be certain to enter in item 1A, the current Employer Identification Number if it is different from the one printed in the address label. **This information is needed so that the Census Bureau can avoid sending duplicate report forms for the same location.** Our file of new business formations is based on the new Employer Identification Numbers issued each year. However, we exclude mailing report forms to new Employer Identification Numbers if we identify them as belonging to existing respondents.

► **Item 1B — PHYSICAL LOCATION OF ESTABLISHMENT** — Accurate and precise information on the physical location of each establishment is needed in order to prepare the tabulations of mining activity in each State and county. Each establishment has tentatively been coded geographically based on the address in the mailing label. Please be sure to complete item 1B, part a, if this is not the correct physical location address of the establishment. Always complete item 1B, part d.

(Definitions of employees and payrolls used to calculate withholding taxes generally may be followed in completing items 2 and 3, Employment and Payrolls.)

CONTINUE ON PAGE 2 →



- **Item 2 — EMPLOYMENT IN 1987** — Report employees at the establishment who worked or received pay for any part of the pay period including the 12th of the specified month. **Include** all persons on paid sick leave, paid holidays, and paid vacation during these pay periods; **exclude** members of Armed Forces and pensioners carried on your active rolls. **Include** officers at this establishment, if a corporation; if an unincorporated concern, **exclude** proprietor or partners. **Include** persons at a general office serving two or more mines if it is located at or near this establishment. **Include** employees paid on a per ton, car, or yard basis. However, **exclude** employees who worked at the mine but were on the payroll of another employer (such as employees of contractors). **Exclude** workers at cement, lime, structural clay, and other manufacturing plants, company stores, boarding houses, bunk houses, and recreational centers.

If manufacturing, distribution, or construction activities are also carried on at this location, employees such as medical staff, yardmasters, etc., who work in units that serve one or more such operations as well as the mineral establishment, should be distributed among the respective establishments. The earnings and hours worked of these employees should be likewise distributed.

**Item 2a — Production, Development, and Exploration Workers** — **Include** workers (up through the working-supervisor level) engaged in manual work, using tools, operating machines, hauling materials, loading and hauling products; caring for mineral properties; exploration work, development, storage, shipping, maintenance, repair, guard services, auxiliary production for own use (e.g., power plant), recordkeeping, and other services closely associated with these production and development operations. **Exclude** supervisory employees above working-supervisor level. For reports from operators, **exclude** employees of contractors.

**Item 2c** — Divide the total on line 2b by 4 and enter the result on line 2c; divide by 4 even if the establishment did not operate in all four periods.

**Item 2d — All Other Employees** — **Include** nonproduction personnel at this establishment engaged in supervision above working-supervisor level, sales, highway trucking and other transportation, advertising, credit, collection, clerical and routine office functions, executive, purchasing, finance; and in legal, personnel (including cafeteria, medical, etc.), and technical work. **Include** force-account construction employees on your payroll engaged in construction of major additions or alterations to your facilities who are utilized as a separate work force. Workers engaged in regular maintenance and repair operations should be included with production, development, and exploration workers. For reports from operators, **exclude** employees of contractors.

- **Item 3A — ANNUAL PAYROLL** — Report the gross earnings paid in calendar year 1987 to employees of the establishment prior to such deductions as employee's Social Security contributions, withholding taxes, group insurance premiums, union dues, and savings bonds. **Include** in gross earnings: commissions, dismissal pay, paid bonuses, vacation and sick-leave pay, and the cash equivalent of compensation paid in kind, such as board and housing, and payments in the form of shared profits and special stock purchases which are subject to withholding tax. **Include** salaries of officers of this establishment, if a corporation; if an unincorporated concern, **exclude** payments to proprietor or partners. **Exclude** payments to members of Armed Forces and pensioners carried on your active payroll. **Exclude** royalty payments to unions.

**Exclude** here, but include in item 5e, the cost of smithing, explosives, fuses, electric cap lamps, and mine supplies used in production, development, and exploration work but charged to employees and deducted from their wages.

- **Item 3B — EMPLOYER'S COST FOR FRINGE BENEFITS** (Supplemental labor costs not included in payroll)

**Item 3Ba — Legally Required Expenditures, Including Social Security Contributions** — Report employer contributions for all programs required under Federal and State legislation, such as: Federal Old Age and Survivors' Insurance; unemployment compensation; and worker's compensation. Also include legally required State temporary disability payments.

**Item 3Bb — Payments for Voluntary Programs** — **Include** payments for union negotiated contracts. For programs supported by joint employer-employee contributions, **include** only the employer payments. **Include** employer payments of: (a) insurance premiums on hospital and medical plans, (b) life insurance premiums, and (c) premiums on supplementary accident and sickness insurance. In reporting payments for insurance, report net payments, i.e., gross payments less any offsetting dividends, refunds, or other reductions in premiums.

Also **include** payments or allocations on: (a) all pension plans regardless of method of administration, (b) supplemental unemployment compensation plans, (c) welfare plans, (d) stock purchase plans in which the employer payment is not subject to withholding tax, and (e) deferred profit sharing plans.

The items listed in the paragraph above are generally considered as deferred rather than current income to employees and are not subject to withholding of income tax. If the payments or allocations by the company are made to a fund, payments to employees out of these funds should not be reported. However, payments made directly to retired employees or their survivors that do not pass through a fund should be included in item 3Bb.

**Exclude** expenditures not of the type listed above, such as losses on company operated cafeterias and snack bars, cost of in-plant medical services, cost of free parking lots, discounts on employee purchases, cost of uniforms and other work clothing supplied to employees, and similar expenditures.

**Exclude** payments which should be reported as wages and salaries in item 3A, such as payments for holidays, vacations, sick pay, bonuses, unused vacation, jury pay, night shift bonus, suggestion awards, and the payments in the form of shared profits and special stock purchases which are subject to withholding tax.

If any of the items are maintained in your records only at the company level, allocate to the mining establishments. In such cases, you may distribute the total on the basis of the ratio of the payroll of each mining establishment to the total company payroll unless you have developed your own method of making such allocations. Specify in "Remarks" the method used and the approximate portion that has been allocated.

- **Item 4 — HOURS WORKED BY PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKERS, BY QUARTER** — **Include** all hours worked or paid for, except hours for paid vacations, holidays, or sick leave, when the employee was not at the establishment. If an employee elects to work during the vacation period, report only actual hours worked by such employee. Overtime hours should be reported as actual hours worked, not straight-time equivalent hours.

The figures should account for all hours worked at this establishment for the entire year by all full-time and part-time production, development, and exploration workers reported in item 2a. **Exclude** hours worked by employees of contractors or by proprietors or partners.

An hour worked is the work of one person for one hour. Report figures from actual records of hours worked wherever available. If no records of hours worked were kept, estimate hours worked from payroll or other records.

- **Item 5 — COST OF SUPPLIES, ETC.** — The entries in this item are used by the Census Bureau to calculate the 1987 value added by mining. The figures reported should represent the total purchase cost of supplies, minerals received for preparation, machinery installed, fuels, etc., actually used or processed during 1987 whether purchased or withdrawn from inventories. **Include** items charged to both the current and capital accounts.

**Include** items consumed by the establishment during the year although purchased prior to 1987, such as minerals received from other mines for preparation (these should also be reported separately in item 17B); purchased supplies consumed for production, development, exploration, maintenance, and repair of mine, plant, and equipment, and in plant construction; supplies which you furnished without charge to contractors or sold to employees for use at this establishment; and consumption of items received from other establishments of your company for which separate reports are being submitted.

**Exclude** items received during the year which were not consumed; services such as advertising, telephone, telegraph, cable, insurance, development, and research rendered by other establishments to this establishment, or services of engineering, management, marketing, legal, and other professional consultants, etc.; expense such as depreciation and depletion charges against plant and equipment, rent and rental allowances, interest payments, royalties, and use of patent fees; supplies (such as timber or lumber), parts, or machinery produced at this establishment; extraordinary losses such as by fire and flood; and labor costs of your employees (these labor costs should be reported in items 3A and 3B).

If there are no records of consumption, purchases may be reported instead for minor items. This can also be done for major items if purchases do not differ significantly from the amounts actually used. Where consumption of major items differs significantly from purchases, consumption may be estimated by adding beginning inventories to the amount purchased and subtracting ending inventories.

Cost is delivered cost—i.e., the amount paid or payable after discounts and including freight and other direct charges incurred by the establishment in acquiring the materials.

**Include** all materials received for consumption; i.e., purchases from other companies, transfers from other establishments of your own company, and withdrawals from inventories.

If minerals were mined and also prepared in this establishment in 1987, the value of such crude minerals should not be included in the cost figures reported.

For supplies, minerals for preparation, machinery installed, fuels, and electric energy received from other establishments of your company, cost should be checked against the values reported by the establishment producing and transferring the supply (see instruction D on page 1). Freight and other direct handling charges should be added.

**Item 5e — Cost of Supplies Used, Minerals Received for Preparation, and Purchased Machinery Installed** — The following list of examples of supplies will indicate the types of items which should be included. The list is shown only as an example. It should not be considered a complete list of the items which should be included.

Bearings	Industrial diamonds
Belting and screen cloth	Jecks
Bolts, screws, and nuts	Lubricating and treating oils
Brake blocks and linings	Lumber and timber purchased
Carbon and graphite brushes	Peckaging materials
Cement	Picks
Chemical reagents	Piling
Dies, jigs, and fixtures	Pipe and fittings
Drill bits and accessories	Plates and sheets
Explosives	Rail and accessories
First aid and safety supplies	Rods and bars
Floor gratings	Roof bolts
Forgings and castings	Stationery, stamps, and office supplies
Fuses	Treck accessories
Gears and pinions	Water purchased
Grinding balls and rods	Welding rods, electrodes, and acetylene
Hammers	Wire, cable, and chain
Handtools	
Hardware	
Headlights and lamps	

**Include** all new and used machinery, equipment, and parts installed whether purchased or received from other establishments of your company. **Include** only physical goods used or put into production. **Exclude** services used or overhead charges. Report the cost of services performed for you by others in item 5e.

**Item 5b — Cost of Products Bought and Resold Without Further Processing** — Report the cost of all products bought and sold in the same condition as when purchased. (Total sales value of such products resold is to be reported in Item 18B under "Resales.")

**Item 5c — Cost of Purchased Fuels Consumed** — Report the total cost for all purchased fuels consumed during 1987 for heat, power, transportation, or the generation of electricity. Fuels consumed at this establishment, but produced in another establishment of your company, should be reported here and in item 17C, and commercial values assigned to them. **Include** anthracite, lignite, bituminous and subbituminous coal, coke, natural and manufactured gas, fuel oil, liquefied petroleum gas, gasoline, wood, and all other fuels, including purchased steam. Be sure to include fuel used to power delivery trucks, forklifts, or other motor vehicles associated with the establishment.

**Item 5d — Cost of Purchased Electricity** — Report the total amount actually paid or payable for electric energy purchased during 1987 from other companies or received from other establishments of your company. **Exclude** the value of electricity generated and used at this establishment, but report its quantity in item 6b.

**Item 5e — Cost of Contract Work Done for You by Others** — Report the total payments made for contract services performed during 1987, including payments for supplies and equipment furnished by the contractor incidental to this work. **Include** services performed in the operation or development of this establishment, such as pumping, tunneling, shaft sinking, stripping, boring test holes, shop work, repair work, and construction.

**Exclude** payments to miners on your payroll but paid on a per ton, car, yard, or footage basis. The compensation of such workers should be included in item 3A.

If part of the payment to a contractor was in material produced, an estimate of the value of the service should be included.



## 1987 CENSUS OF MINERAL INDUSTRIES

### INSTRUCTIONS FOR REPORTING NONMETALLIC MINERALS (EXCEPT FUELS) MINING — Continued FORMS MC-1401, MC-1402, AND MC-1403

**Include** payments to contractors who strip-mined minerals for your account.

**Exclude** payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined. Such payments to suppliers should be reported in item 5b, if the minerals were bought for resale without further processing, or in items 8a and 17b, part I, if the minerals were purchased for preparation at this establishment.

**Exclude** payments to other establishments for the cost of custom preparation of minerals mined by this establishment.

► **Item 6 — QUANTITY OF ELECTRICITY** — Report all quantities for electricity in **thousands** of kilowatthours.

**Item 6a — Purchased Electricity** — Report the quantity of electricity for which cost is reported in item 5d.

**Item 6b — Generated Electricity** — Report the total quantity of electric energy generated at this establishment (gross less generating station use) during 1987. When a figure is reported on this line, data relating to the activity of the power stations should also be included in other sections of this report. For example, the number of employees assigned to the power station, their wages, and hours worked should be included in the figures reported in items 2, 3, and 4; and the cost of fuels used to generate electricity, in items 5c and 17c.

**Item 6c — Electricity Sold or Transferred** — Report the quantity of electric energy which was also included in items 6a and 6b, but which was sold to other companies or transferred to other establishments of your company. Report the value of electricity sold in item 18B on the "All other products" line.

► **Item 7 — INVENTORIES OF THIS ESTABLISHMENT** — Report the value of all inventories owned by this establishment regardless of where the inventories are held. The data on each report form should exclude inventories owned by others, but held by your company.

In reporting inventories of individual establishments, multiestablishment companies should assign to each establishment those inventories that the establishment is responsible for as if it owned them. For example in completing the report of a minerals establishment, report those inventories that are attributable to its operations, even if the inventories are held elsewhere, e.g., at a warehouse, a centrally located stockpile, or a storage area. The inventories included in the report for an operating establishment which are held elsewhere should not be included in the report of the establishment where they are actually stored. Thus, inventories should not be duplicated on establishment reports.

**Item 7a — Mined or Quarried Products** — Report stockpiles of products (raw or beneficiated ores and quarried products) ready for shipment. Include stocks of raw products awaiting treatment or beneficiation that were mined or quarried at this establishment.

**Item 7b — Supplies, Parts, Fuels, etc.** — Report the cost of items to be used for extracting or beneficiating. Include stockpiles of minerals received from other establishments for preparation.

**Item 7d** — The sum of 7d(1) and 7d(2) should equal the total inventories reported in item 7c.

**Item 7a(1) — LIFO Reserve** represents the excess of current period cost over the LIFO carrying value. LIFO reserve is the difference between the current cost (e.g., FIFO) of inventories (gross value) and the LIFO carrying value (net value).

#### Items 8, 9, 10, and 11

Items 8 and 9 provide for reporting assets, capital expenditures, retirements, and depreciation and/or depletion for buildings and other structures, machinery and equipment, mineral exploration and development, and for mineral land and rights. Item 10 provides for reporting rental payments for buildings and machinery. Item 11 provides for reporting all current account expenditures for mineral exploration and development, and for mineral land and rights.

#### COLUMNAR INSTRUCTIONS FOR ITEMS 8, 9, 10, AND 11

**Column (2) — Buildings and other structures** — Report buildings and structures directly related to mineral exploration, development, and production. Exclude company houses and general recreation facilities. Include machinery which is an integral part of a building, such as hoists, cranes, crushers, separators, and power plants. Include, where capitalized, values from construction by your own employees. Exclude value of land in items 8 and 9. Item 10 should include rental payments for the land on which the buildings and other structures stand.

**Column (3) — Machinery and Equipment** — Report all exploration, development, and production machinery; transportation equipment; end office equipment. Include such equipment as excavators, loaders, locomotives, tractors, trucks, hoists, drills, compressors, pumps, and treatment plant machinery, as well as furniture and fixtures for offices, cafeterias, and change rooms. Include the value of equipment produced and used at this establishment. Include all mining, loading, transportation, and similar equipment for use at mines; treatment plant equipment which is not an integral part of a building; and automobiles, trucks, and similar equipment. Include replacements as well as additions to new capacity.

**Column (4) — Mineral exploration and development** — Report development and exploration outlays which were charged to a capital or Office of Minerals Exploration account (items 8 and 9) as well as those charged to a current account (item 11). Include capitalized expenditures for entries, shafts, rail and other road construction, test boring, surveying, and the like.

**Column (5) — Mineral land and rights** — Report expenditures for acquiring either undeveloped or developed acreage, including lease bonuses and any other outlays necessary to acquire leases, mineral rights, and fee lands incident to mineral exploration, development, or production.

► **Item 8 — ASSETS, CAPITAL EXPENDITURES, AND RETIREMENTS** — (If this establishment was involved in a leasing arrangement, see special instructions on page 4.)

**Items 8a and 8d — Gross Value of Depreciable and/or Depletable Assets** — Report the acquisition cost (not current market value) of depreciable buildings, other structures, machinery, and equipment for which depreciation or amortization reserves are maintained. Also report the acquisition cost of assets, such as capitalized mineral exploration and development or acquisition cost for mineral land and rights for which depreciation, amortization, or depletion accounts are maintained.

For new construction or other improvement projects in progress but not yet completed, include in the value of depreciable assets (items 8a and 8d) the cumulative capital expenditures for such projects already in place at the beginning and end of the year respectively. (Also include the expenditures capitalized for these projects during 1987 in item 8b.)

If the establishment was acquired during the year, the value at the end of the year (item 8d) should represent your purchase cost adjusted for capital expenditures (item 8b) and deductions (item 8c) since the time of purchase.

If the establishment was sold by your company during the year, report the gross value at the beginning of the year (item 8a) at its acquisition cost. (Also report this acquisition cost plus capital expenditures which may have occurred since the beginning of the year and the time of sale in item 8c.)

Include used assets purchased during the year at their market value at the time of transfer rather than at original book value.

If the establishment maintains a tenant relationship with the parent company or one of its subsidiaries and pays "rent" for the use of either plant or equipment, the gross value of the assets made available to the establishment should be reported as if the establishment owned them. (See instructions below for rental payments. In item 10, DO NOT report rent paid to the parent or subsidiary for assets reported in item 8.)

The gross assets reported for the end of each year should be consistent with the gross assets at the beginning of the year and the annual asset changes during the year. Item 8a plus item 8b minus item 8c equals item 8d.

**Item 8b — Capital Expenditures During the Year** — Report the actual capital outlays during 1987, not the final value of buildings or other structures completed or equipment put in place during the year, in columns (2) and (3). Also see the columnar instructions for columns (4) and (5).

Capital expenditures during 1987 may be determined by the following computation: (a) the cost of additions completed during the year, plus (b) work-in-progress at the end of the year, minus (c) work-in-progress at the beginning of the year. Include labor and installation costs whether on contract or by your own forces. These expenditures are of the type for which depletion, depreciation, or amortization accounts are ordinarily maintained. Exclude the cost of maintenance and repairs charged as current operating expense. If no expenditures of the kind described were made, mark (X) in the zero check-box.

Break down the total capital expenditures for buildings, structures, machinery, and equipment shown in item 8b, columns (2) and (3) between 8b(1), capital expenditures for new buildings and machinery, and 8b(2), capital expenditures for used buildings and machinery.

**Item 8b(1) — Capital Expenditures for New Buildings and Machinery** — Report replacements as well as additions to capacity for new depreciable assets of the type to be included in columns (2) and (3). Report the value of improvements and capitalized repairs to machinery and equipment including those done to assets transferred from other establishments of this company.

**Item 8b(2) — Capital Expenditures for Used Buildings and Machinery** — Report expenditures at this establishment for old or existing plants and for second-hand equipment acquired from others (including the U.S. Government). Include at gross book value machinery or equipment transferred from other establishments of your company.

**Item 8c — Retirements and Disposition of Depreciable and/or Depletable Assets During the Year** — Report the gross value of depreciable assets sold, retired, scrapped, destroyed, abandoned, etc., during the year at their acquisition cost. Also include the value of assets transferred to other establishments of your company at their acquisition cost rather than current market value. Do not include charges to depreciation or amortization reserves.

► **Item 9 — DEPRECIATION AND/OR DEPLETION CHARGES DURING THE YEAR** — (If this establishment was involved in a leasing arrangement, see special instructions on page 4.)

Report the reduced value of assets (reported in item 8d) brought about through use, mineral extraction, gradual obsolescence, or the effect of the elements (decay or corrosion). Include charges against those acquired or completed during the year. Report cost depletion as an allocation of wasting investment rather than percentage or statutory depletion used for Federal income tax purposes.

► **Item 10 — RENTAL PAYMENTS DURING THE YEAR** — (If this establishment was involved in a leasing arrangement, see special instructions on page 4.)

Report rental payments made to other companies for use of such depreciable assets as buildings, other structures, machinery, and equipment. Do not include as rent any payments made by the establishment to the parent company or another subsidiary of the parent for use of buildings and equipment owned by the parent company or its subsidiary. The value of such company-owned assets should be reported in items 8a and 8d as if they were owned by the establishment and any capital expenditures made to acquire them or any depreciation charges against them should also be included in the proper section. Rental payments for buildings and other structures should include the rental payment for the land on which they stand.

If the establishment uses buildings or equipment leased from other companies, and rental payments are not made directly from the establishment's account but are handled centrally at a company or division level, please report the share of rental overhead charged to the establishment or estimate the share of rental charges appropriate to the operations of the establishment. Columns (4) and (5) do not apply to item 10.



► **Item 11 — CURRENT ACCOUNT EXPENDITURES DURING THE YEAR** — Report expenses for mineral properties charged to current accounts. Include all supplies, machinery, equipment, parts, fuel, power, etc., used for development or exploration (whether purchased or received from other establishments of your company), and charged as current operating expenses. Include the cost of maintenance and repairs associated with development or exploration activity which is charged to current accounts. Include acquisition costs for mineral land and rights which were not capitalized. Include the cost of royalty payments related to mineral production; however, exclude lease rents which should be reported separately in item 13. Also include labor costs whether on a contract basis or by your own forces. Columns (2) and (3) do not apply to item 11.

► **Items 14 and 15 — CHANGE IN OWNERSHIP OR COMPANY AFFILIATION AND ORGANIZATION** — Please complete these items fully if pertinent. Accurate completion of these items will avoid unnecessary correspondence, as well as reduce the possibility of your receiving more than one report form for the mining activity at this location.

► **Item 17A — WATER USE DURING 1987** — In question 1, report the total **annual** new water intake, including fresh, brackish, and salt water from all sources.

► **Item 17B — SUPPLIES USED, MINERALS FOR PREPARATION, AND PURCHASED MACHINERY INSTALLED DURING 1987**

**Part I — Items Purchased or Received From Other Establishments and Used** — This inquiry calls for a breakdown of supplies used, minerals received for preparation at this establishment, and purchased machinery installed during 1987, reported in item 5a of this form. Separate figures are required for each item listed. The total cost in item 17B, part I, column (D), should agree with the total cost reported in item 5a.

**Column (C) — Quantity** — Report the quantities actually used in terms of the unit of measure specified in column (B-2). Report the quantity of crude minerals received for preparation before removal of refuse and waste.

**Column (D) — Delivered Cost** — Report amounts actually paid or payable after discounts, and include freight and direct charges incurred in acquiring the listed items during 1987. For supply items transferred from other establishments of this company, report values as described in instruction D on page 1. For crude minerals transferred, report the value prior to preparation.

**Purchased Machinery Installed (Census material code 3530201)** — **Include** all machinery, equipment, and used plant which were purchased, or which were received from other establishments of your company, whether charged to the current or capital accounts. (Machinery charged to the capital account should also be reported in item 8b.) **Include** equipment which was installed in the mine, mill, or preparation plant as well as mobile loading and transportation equipment.

**Explosive materials and blasting accessories** — Blasting accessories should include items such as safety fuses, detonator caps, detonating fuses, and liquid oxygen.

**Part II — Quantity of Minerals Mined and Prepared at This Establishment** — (Not applicable to the production of crushed and broken stone or sand and gravel.) **Include** here only the material mined and prepared by the mine employees covered by this report or by pit or quarry contractors mining for your account, for which contract cost is reported in item 5e. **Do not include** in this section materials received from other establishments of your company. Such materials should be included in columns (C) and (D) of part I.

**Item 17C — FUELS USED DURING 1987** — Report all fuels purchased from other companies or transferred from other establishments of your company and used at this establishment. A purchased fuel is considered to

be any substance that was purchased or transferred from outside of the defined boundaries of the establishment in which it was consumed, for the production of heat, power, or generated electricity.

Report quantities in the specified unit of measure in column (C) and cost in thousands of dollars in column (D). Cost is delivered cost, that is, the amount paid or payable after discounts and including freight and other direct charges incurred by the establishment in acquiring the fuels. Fuels transferred or received from other establishments of your company should be reported at their approximate market value.

**Lines 2 and 3 — Fuel Oil** — If quantities are billed in gallons, divide quantity by 42 to obtain barrels.

**Line 4 — Gas** — If your gas is billed in therms, convert as follows: For natural gas: 10,000 therms equal one million cubic feet. For manufactured gas: 6,000 therms equal one million cubic feet.

**Line 5 — Gasoline** — **Include** gasoline used in automotive and other equipment.

**Line 7 — Total** — Should be the same as item 5c.

► **Items 18A and B — TYPE OF OPERATION AND PRODUCTS AND SERVICES** — See instructions on form.

► **Item 22 — CERTIFICATION**

**Period covered by the report** — Enter the month of the beginning and the end of the period your report covers. If a calendar year report, "From January, 1987, to December, 1987." If a fiscal year, specify which, such as "From December, 1986, to November, 1987." If a part-year report is submitted because the establishment was not in operation or under your company's control for the entire year, specify the period covered, for example, "January, 1987, to August, 1987," or "June, 1987, to December, 1987."

## ESTABLISHMENTS INVOLVED WITH LEASING ARRANGEMENTS FOR EQUIPMENT AND/OR BUILDINGS

**Note** — The following instructions are a modification to those included in prior census instructions. We believe they are merely making explicit what has been reported to us in prior censuses.

If any of the equipment or buildings used by this establishment in its production are leased from other companies, the equipment should be reported according to the type of lease negotiated with the producer or the lessor.

If the leasing arrangements meet the criteria set down by the Financial Accounting Standards Board (FASB) for a **capital lease**, please report the original cost or market value of that equipment and building as a value of fixed assets. Report annual depreciation and retirements charged against this equipment. If any building or equipment has been acquired this year under a capital lease, please report the cost (at the market value) as a capital expenditure and include this value in the end of year assets and charge the first year depreciation (and retirements if any). Do not report the periodic payments made to the lessor in the rental section.

If the lease qualifies as an **operating lease**, do not include the value of the building and equipment as assets, capital expenditures, depreciation, or retirements, but report the periodic payments made to the producer or the lessor in the rental section.

# PUBLICATION PROGRAM

## 1987 CENSUS OF MINERAL INDUSTRIES

Publications of the 1987 Census of Mineral Industries, containing data on establishments primarily engaged in the extraction of minerals, are described below. Publications order forms for the specific reports may be obtained from any Department of Commerce district office or from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233.

### Preliminary Reports

#### Industry series—12 reports (MIC87-I-10A(P) to -14E(P))

Preliminary data from the 1987 census are issued in 12 separate reports covering 31 mineral industries. Preliminary summary data for the U.S. and States are released in one report.

### Final Reports

#### Industry series—12 reports (MIC87-I-10A to -14E)

Each of the 12 reports provides information for an industry or a group of related industries (e.g., clay, ceramic, and refractory minerals). Final figures for the United States are shown for each of 31 mineral industries on quantity and value of products shipped and supplies used; inventories; quantity and cost of fuels and electric energy purchased, and the quantities of fuels produced and consumed; capital expenditures; assets; rents; employment; depreciation, amortization and depletion; payrolls; hours worked; cost of purchased machinery; value added by mining; mineral development and exploration costs; number of establishments; and number of companies. Comparative statistics for earlier years are included. Industry statistics are shown by State, type of operation, and size of establishment.

#### Geographic area series—9 reports (MIC87-A-1 to -9)

A separate report for each of the nine geographic divisions presents statistics for individual States for two- and three-digit industry groups by type of operation and by county. Also, data are shown for value of shipments, value added by mining, employment, payroll, hours worked, capital expenditures, cost of supplies, etc., purchased machinery installed, and number of mining establishments, with comparative 1982 data on employment and value added by mining.

#### Subject series—2 reports (MIC87-S-1 to -2)

One of these reports is a general National-level summary; the other report contains detailed statistics on fuels and electric energy consumed by mineral industries.

#### Reference series—1 report (MC87-R-1)

The Numerical List of Manufactured and Mineral Products includes a description of the principal products and services published in the 1987 Censuses of Manufactures and Mineral Industries.

## MICROFICHE

Every final published report in the 1987 Census of Mineral Industries will be available on microfiche.

## PUBLIC-USE COMPUTER TAPES AND COMPACT DISCS

Data from the final industry series, and geographic area series will be available on public-use computer tapes and compact discs-read only memory (CD-ROM). These tapes will provide the same information found in the final reports. Computerized data products are available for users who wish to summarize, rearrange, or process large amounts of data. These products, with corresponding technical documentation, are sold by Data User Services Division, Customer Services (Tapes), Bureau of the Census, Washington, DC 20233.

## OTHER ECONOMIC CENSUSES REPORTS

Data on retail trade, wholesale trade, service industries, construction industries, manufactures, transportation, enterprise statistics, minority-owned businesses, and women-owned businesses also are available from the 1987 Economic Censuses. A separate series of reports covers the censuses of outlying areas—Puerto Rico, Virgin Islands of the United States, Guam, and the Northern Mariana Islands. Separate announcements describing these reports are available free of charge from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233.











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